

# THE PORTABLE **Companion**

FOR OSBORNE COMPUTER USERS

October 1983

USA \$2.95

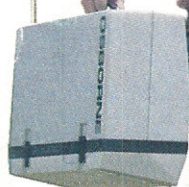
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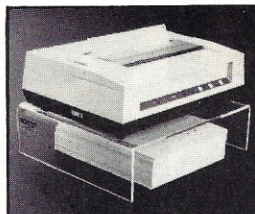


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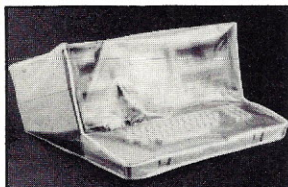
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business manager  
**Ginger Taylor**

editor  
**Jackie Rae**

technical editor  
**Brad Baldwin**

assistant editor  
**Denise Caruso**

special contributor  
**Adam Osborne**

contributors  
**Gary Cuevas**  
**Barbara Elman**  
**Elizabeth Babb**

production manager  
**Meredith Ittner**

art direction  
**Roeth/Olson Design Associates**

graphic artists  
**Eric Schmidt**  
**Ron Walter**

advertising manager  
**Deanna D'Zamba**

advertising coordinator  
**Carol Bowers**

Illustrations by Larry Baumgardner  
Cover art and direction by Michael Lee, Very Graphic Art

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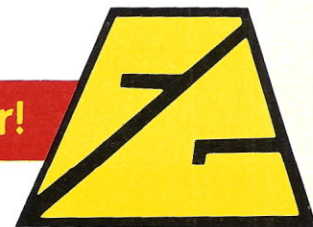
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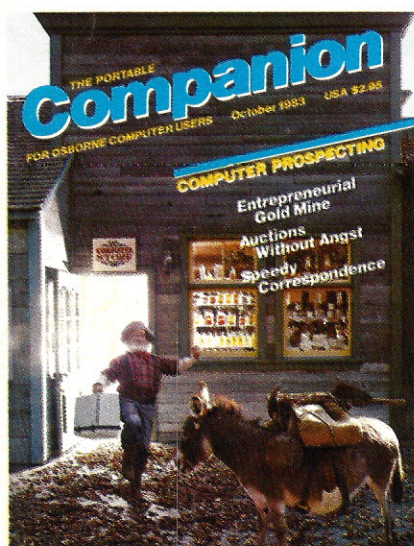
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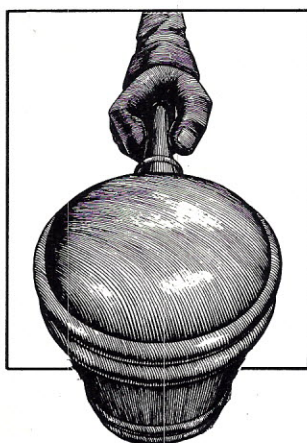
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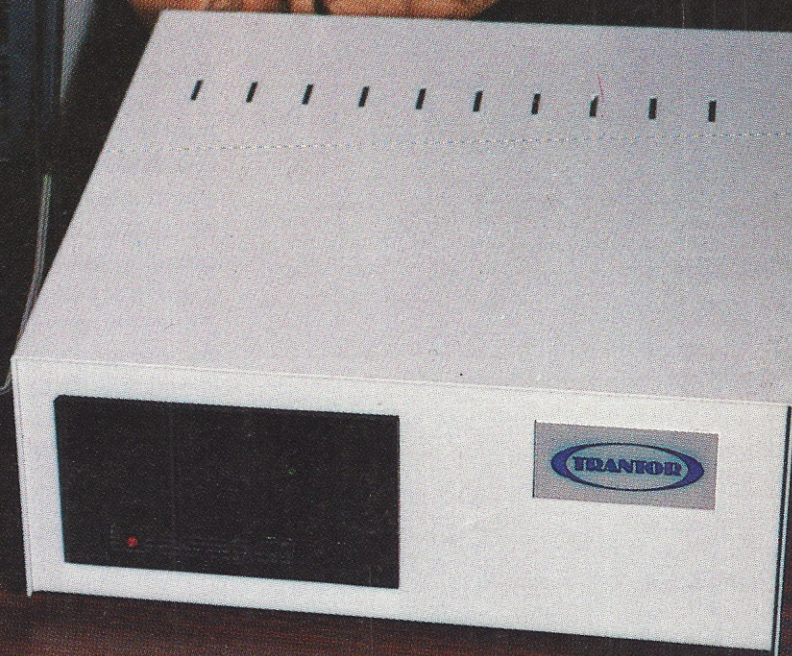
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## The frontier spirit

**T**he personal computer industry originated new careers for many of us. Those of you bitten by the bug who haven't responded to the entrepreneurial itch ought to seriously look at the career possibilities in the industry today. In most cases it takes only a computer and frontier spirit to get started.

If you find it difficult to tear yourself away from your computer in the evenings and only go to work so you can pay for that hard disk you've been coveting, you could be a candidate for computer conversion.

The pages of this magazine and others are ample testimony to the industry and ingeniousness of the American people. The trick is to find your little niche and dig into it. Whether it be training, programming, writing, engineering or inventions, thousands of people need your services. Whether you're a laid-off GM worker, a re-entry woman or just plain sick of your current job, opportunities abound to start over.

In this issue we feature a story on entrepreneur Eric Ruff, creator and marketer of the SuperGraphics software programs. Ruff is an excellent example of today's smart computer prospector. Programmer Janet Mika and auctioneers Pat and Ken McCormack also took the frontier spirit to heart and developed a program to streamline the paper-weighted traveling auction (story on page 43).

But the classic computer prospector is undoubtedly Adam Osborne. A true entrepreneur, Osborne saw an opportunity to stake his claim in the personal computer market and drove it in. He succeeded in blazing a new trail for the entire industry. The computer frontier is still rife with potential for the bold and adventurous, but those opportunities won't last forever. The pioneers will ride off with them.

**Jackie Rae**  
Editor



# Can you tell the IBM<sup>®</sup> from the Transtar 130?

A

Letter quality  
standard of  
the industry

5x magnification

One of these two print samples was generated by an **IBM Selectric II**: the letter quality standard of the industry.

The other was generated by the new **Transtar 130** letter-quality printer.

B

Letter quality  
standard of  
the industry

5x magnification

**A**nd print quality is just the beginning! The new Transtar 130 daisy wheel printer is also plug-and-go compatible with the best-selling word processing packages! It features bidirectional printing, superscript, subscript, underlining and a true boldface. Retail price? **Only \$895.**

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Votrax software for Osbornes:

★ "QUIZZER" For programmed learning of ANY subject. \$29.95

★ "OSMOUTH" Software to easily access Votrax. \$29.95

.....

## O-4 JOY Joystick Interface

An interface to any Atari joystick, compatible with ANY software which uses the Osborne arrows keys. Wow! You can use this interface with WordStar™, SuperCalc™, dBase™, AND any game which uses the arrow keys for movement and the space bar to fire WITHOUT ANY MODIFICATION TO THE SOFTWARE! It piggy backs in the keyboard port of the Osborne, and looks like you're pushing down the arrow keys while allowing full and simultaneous access to the keyboard.

### O-4 Joy Interface \$39.95

This is an introductory offer - after 9/1/83: \$49.95

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We have more games and utilities designed for the Osborne 1 and **Executive** than anyone else in the world! Our games use full graphics capabilities and are consistently rated tops in the market by users. All are made available exclusively through Portable Software or your PS dealer. Write or call for our latest catalog.

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Dealer inquiries are always invited. Our office is open 10:00 a.m. to 4:30 p.m. EST. Order line open 24 hrs.



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# Letters

## A godsend

A month ago when it was flooding where you are, a quite different event took place here that may have totally escaped your notice. On Ash Wednesday, 16 February, southeastern Australia experienced the worst bushfires in more than 40 years. Within 15 kilometres of where this is being written, more than 25 people died in a few hours that day, owing to the fires. With winds of 75 km per hour and temperatures at 112 degrees Fahrenheit, at times the fires spread a kilometre in 11 seconds.

What in heaven's name has this got to do with you? The fact is that in the confusion of the moment, the Osborne 1 on which this letter is now being written proved a godsend to some people. The day following Ash Wednesday, I went down to the local community hall to help. One thing was obviously crying out to be done but there was no facility to accomplish it.

There were hundreds of messages lying about scribbled on bits of paper with names of people looking for other people, names of people who had been burnt out and offers of help in the form of available accommodations.

Seeing this, I went home, grabbed the Osborne and took it down to the relief centre and started putting all the information onto floppies using WordStar. I have no database programmes and wouldn't have had time to learn even if they had suddenly appeared. There was no time to do elaborate systems analysis. But with the ^QF function alone, it was possible to get information out that otherwise would have been unob-



tainable. The look of relief on a few people's faces on learning that a friend or relative was safe made all the frantic effort worthwhile.

Your portable machine was really appropriate in that situation because trying to tie into the mainframe computer systems designed to do the same job when the telephones were not reliable was hopeless. Also the mainframe machines were set up for updating every 24 hours. In this situation the people couldn't wait hours.

You have an excellent machine.

Thomas H. Rich  
Emerald, Victoria  
Australia

## BASICally serious

I want to advance a serious suggestion. It is for you in your role as editor and for whomever has responsibility for the documentation on the Ozzie. I represent a growing proportion of your sales. I am a computer illiterate and I employ Ozzie to upgrade my managerial skills to the last quarter of this century. If you are in my position, the glitches and grabs hidden in the "system" residing within Ozzie and the programs are truly frustrating. For example, if you work through any text on BASIC you quickly run smack into random numbers. The user group helped me discover the basic tricks to random num-



## ROBONICS

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**Yes!**

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### Amazing Flexibility!

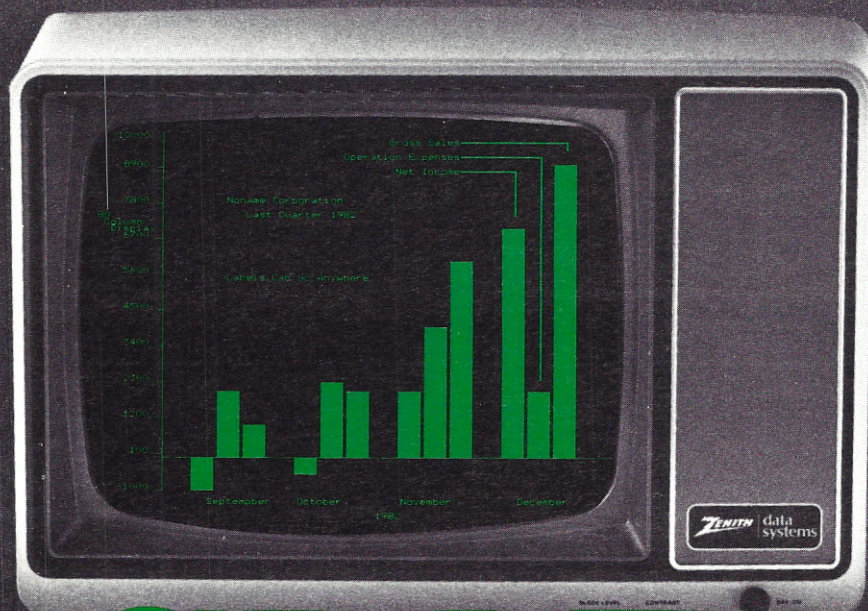
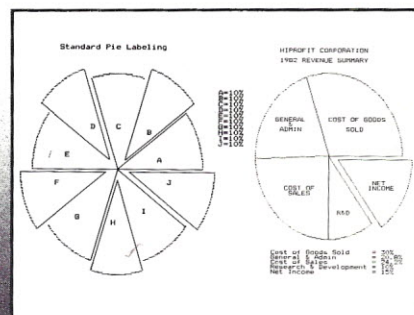
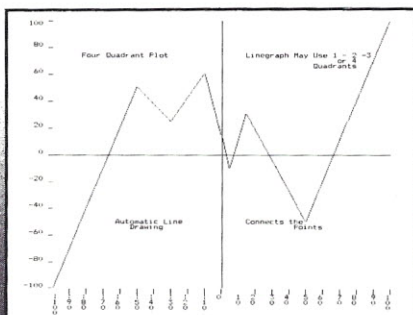
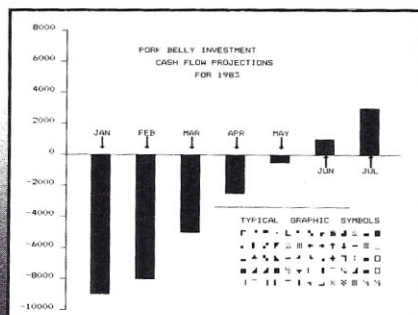
- You can vary the size of pie charts, printing two or three per sheet, while selecting and exploding important slices.
- Within charts, bars can be clustered together, or spaced evenly across the page.

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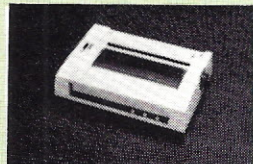
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NEC

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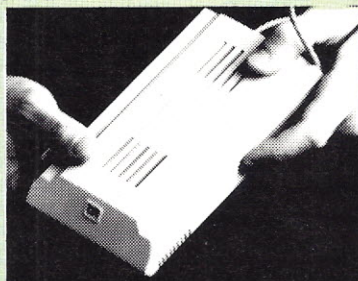
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Single button operation makes the **Courier** very easy to use. Comes with a DB-9 modem cable for the Osborne, powerful communications software (\$80 value), power supply & modular telephone cable.



OKIDATA

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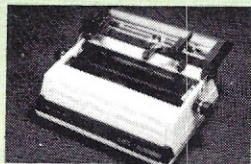
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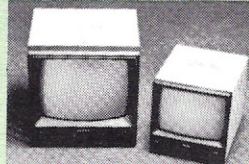


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bers. But I endured a week of frustration. I knew the concept and grasped it easily. However, the "package" didn't function.

Since your marketing strategy is to package Ozzie with programs, this frustration is not directed at the program marketing source but is directed at Ozzie. You take the heat for Microsoft's hidden traps. You'd better start an effective program of identifying these and eliminating them or your second source of referral sales will atrophy.

You have a fine product and a fine magazine. My continued support is yours.

Richard P. Runke  
Fort Monroe, VA

---

### Indexing variables

While reading my magazine I've noticed ads for software that allow the user to obtain an index listing of all the variables in his or her program. I find this type of information invaluable in programming. I was wondering if others realized, however, that the Osborne XREF routine used in CBASIC will give the same listing in MBASIC if the user will save the MBASIC file in ASCII format and run XREF program with the MBASIC ASCII file.

I've also found that if I make the mistake of not leaving a space between the command INPUT and the variable it will be listed in the variable listing because it will read, for example, INPUTY\$ as a variable and print out the line number where this occurs.

Harry Robinson  
South Bend, IN

---

### Oh, so graceful

I was just sitting reading the latest issue of *Portable* and the *FOG-HORN* and was thinking how I could write a book about all the screw-ups OCC has made over the last two-plus years (i.e., DD/80+ column upgrade, software upgrade, technical manual, P-system, poor to non-existent customer

service which has always taken a back seat to new machine sales, etc.). But instead, I decided to try to think positive. After about two hours I finally hit upon it.

Without a doubt, Osborne Computer Corporation apologizes more gracefully than any other company I have ever dealt with.

D. M. "The Rebel" Hurst  
29 Palms, CA

---

### Devilish troubles

Despite Brad Baldwin's excellent article (Oct/Nov 82), a few Osborne owners, including myself, have been having trouble interfacing the Diablo 630 daisywheel printer at 1200 baud. After trying almost every software fix available, the printer still had buffer overflows and unequal rollover/roll-down on super/subscripting. The problem, alas, was not with the Osborne. The Diablo dealer finally traced it to a malfunction in the HPRO5 board.

Others may be interested to know that the annoying 10-line form feed condition that WordStar produces at the end of a 1200-baud print-out can be corrected. Just use INSTALL to patch the following:

06F8	14
0704	1B
0705	0D
0706	50

This initializes the printer at the end of a print-out so that a manual form feed will be a complete page, as it is when the printer is first turned on.

Always enjoy your magazine.  
Keep up the good work.

Glenn Borchardt  
Oakland, CA

---

### Micros and pregnancy

As office automation is putting thousands of secretaries, including pregnant women, to work in front of word processors, I wonder is there any negative effect for pregnant women to expose themselves—as close as one foot—to

microcomputers for 40 hours a week?

Also, the picture of Dr. Mackenzie and the baby that appeared on page 43 of the June issue had drawn my concern over the health problems for an infant who is exposed to an Osborne (with 12" monitor) for a long period of time each day.

L. Wong  
St. Paul, MN

*Your concern for the welfare of pregnant women may be warranted and the issue is undoubtedly being studied somewhere. Unfortunately, we aren't aware of any specific studies that would answer your questions. If any of our readers know of research on harmful effects from microcomputers or monitors to pregnant women or infants please drop us a note.*

*In the meantime, consult with your personal obstetrician if you find yourself in a computerized environment during pregnancy. You may want to take some precautionary measures such as the use of a lead apron.*

*In regards to Dr. Mackenzie and the baby: It appears that the infant strapped to his abdomen is there for photographic purposes and most likely is not going to be stationed there for long periods of time each day. However, if you know of any infants who are interested in computing at such a tender age, please let us know. It sounds like a great story.*

---

### Fone phixes

Regarding Cheryl Peterson's letter (*Letters, June*) regarding problems with AMCALL's PHONE.NUM file and "call waiting": she can easily modify PHONE.NUM with WordStar as a Non-document file. I have several versions of PHONE.NUM to use when I travel. Each contains all the local numbers for RCP/M, CBBS and similar systems, plus the access numbers for Telenet and Tymnet in the city I'm visiting. The solution for her "call waiting" is the companion



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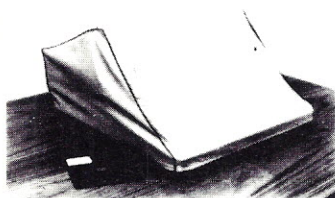
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service, "call forwarding." Before she places a data call, she should forward her incoming calls to another number. I recommend this second number be one that will not answer (such as a business number at night). If calls are forwarded to Time or Dial-A-Prayer, in-bound toll callers will be charged for a worthless connection.

Robert G. Savage  
Del City, OK

### Just send it ...

In response to your inquiry: YES, I am very much interested in a copy of your premier issue.

I hope that you get sufficient response to justify a second printing and suggest that you repeat the inquiry since the reply address given appears incomplete and some replies will probably never reach you.

Congratulations on your monthly format and thanks for the promise not to forget the Osborne 1 owners!

Gerhard Barth-Wehrenalp  
Ambler, PA

Ah, heh-heh (she writes, a blush rising to her cheeks), sorry about that. The complete address is:

The Portable Companion  
Mailbox 20  
26538 Danti Court  
Hayward, CA 94545  
Attn: Editor

### Clarification

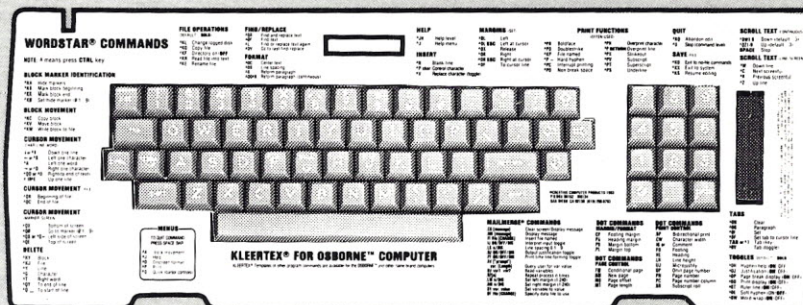
In "Playing the Market" (September issue, page 19), Edward Valenzuela makes the statement that "such companies as Apple, Altos, Apollo, Corvus, Fortune Systems, Televideo Systems and OCC have either gone public by offering stock or made announcements to that effect." Some of our readers have interpreted this to mean that OCC has gone public. This is not the case and the reference should have been deleted from the article. We apologize for the miscommunication.—Ed.



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# Adam Osborne

## Eight bit versus sixteen bit

Nothing better underlines the important influences shaping the microcomputer industry than the current battle of the bits. Will sixteen bit microcomputers replace eight bit machines? Undoubtedly, yes, in time; however, the capabilities of the respective microcomputers have little or nothing to do with this outcome. It is industry standards that will cause the sixteen bit victory. But this victory will be slow to come and never completely won due to hard economics.

The need for standards within the microcomputer industry are so overwhelming that any company that does not support industry standards has a bleak future. Customers are far more likely to buy a product that will run industry standard programs than a microcomputer that only understands its own unique brand of software. Computer dealers, likewise, would rather stock one class of software, executable on every piece of hardware they carry, rather than needing five or more versions of a pro-

gram to cover everyone's brand of computer. This is all so self-evident it is hard to believe anyone could disagree.

So why has it not happened sooner?

The answer is that everyone was in favor of an industry standard so long as the standard was theirs, and no one was strong enough to enforce their standard on everyone else. Two or three years ago Apple Computer was perhaps strong enough in the industry but they discouraged other companies from mimicking the Apple II. Today, Apple is no longer strong enough to establish itself as a standard, even if they chose to. IBM is. IBM has chosen the 8086 microprocessor, which happens to be a 16-bit device and for that reason 16-bit microprocessors will be the long-term victors. But let me hasten to add that there will always be a large low-end market for very inexpensive microcomputers where the customer cares little if the product is compatible. Providing



the product has adequate software and the price is right, people will buy. Microcomputers using eight bit processors will remain a good deal cheaper than their 16-bit big brothers for some time.

People are not flocking to the 8086 microprocessor because it is the best or most powerful around. It is not. It is probably the least powerful 16-bit microprocessor available today. In fact, the standard 8086 microprocessor executes programs at about the same speed as some faster versions of the Z80 used in many eight bit microcomputers. So once again, it is market perception rather than reality at work.

When it comes to market perception, there are, in fact, a number of interesting anomalies. Take the whole subject of communications. I have frequently been told by potential customers that they would rather buy the Executive II than the Executive I because the computer they choose must communicate with IBM mainframes. The perception among customers is that an IBM PC is the logical choice if they want to communicate with an IBM mainframe. They are wrong. The IBM PC contains none of the hardware or software needed to act as a standard IBM mainframe terminal. This hardware and software can be added, but only at considerable extra expense. All this communications hardware and software is available with the Executive I. Some customers have not understood the economies of buying an Executive I to communicate with their IBM mainframe. Their perception of a need for universal compatibility is so strong that they will take the Executive II from which all the Executive I communications capabilities have been removed (in order to maintain PC compatibility); and then pay even more to have this removed hardware put back in the PC compatible fashion.

But then who said microcomputer buyers are logical people?

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Enumerator adds variable line numbering abilities to documents created by WordStar. Enumerator allows you to number by line in any sequential pattern (ideal for attorneys, text writers and BASIC program writers). (*The Orthocode Corporation™*)

### **dBASE II™**

dBASE II is a powerful, easy-to-use data management tool for constructing and manipulating numeric and character information files. A special feature of dBASE II is its own English-style program-building-language. You may SORT, EDIT, or DISPLAY a database directly from the keyboard, or write menus and programs to support your specific applications. (*Ashton-Tate, Inc.™*)



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Mailman creates and manages your mailing list. Formatted screen entry with eight different selecting criteria gives the Osborne user ease of access and entry, along with discrete listing capabilities. In addition, the program automatically sorts data by zip code and name. Mailman is designed to work with WordStar and MailMerge®. (*Standard Microsystems™*)

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A SuperCalc™ overlay designed for both the real estate professional and the potential home-buyer or seller. Using SuperCalc's "What-if" capabilities, comparative analysis of the complex factors involved with real estate investment can be performed swiftly. Models are supplied for individual residence or income property analysis. (*SimpleSoft™*)

### **Documate/Plus™**

This is an indexing program that works with WordStar to create an automatic text index or table of contents. Documate/Plus supports up to 8 levels of sub-indexing, and you can choose to index either words or phrases. (*The Orthocode Corporation™*)

### **Spellguard™**

Spellguard is a computer program that helps the user to eliminate spelling and typographical errors in written materials prepared with WordStar. Two dictionaries are supplied with Spellguard: the first consists of 20,000 of the most frequently used words in the English language and the second contains 10,000 words and can be easily expanded to include technical vocabulary and/or foreign languages. (*Sorcim™*)

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muMATH-80 is a fully interactive Symbolic Math System that efficiently and accurately performs true algebraic and analytic operations. muMATH can evaluate and simplify expressions containing variables that have not been assigned numeric values. The muSIMP-80™ programming language is provided with this package to extend muMATH or to implement other Artificial Intelligence applications. However, most Osborne users will find muMATH sufficiently powerful to handle the majority of their mathematical problems. (*The Soft Warehouse™*)

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This program interacts with WordStar to add basic math capability to your Osborne computer. Math\* performs addition, subtraction, multiplication and division. Within your WordStar document, Math\* allows you to perform math functions in either rows or columns. (*Force Two®*)

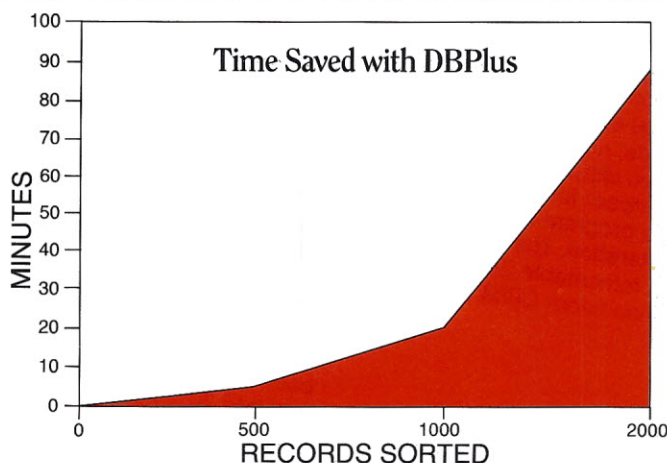
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## Lost in spaces

Brad Baldwin

Questions I ask myself, Volume 1: Why has MicroPro not yet produced a version of WordStar that supports proportional spacing? Certainly MicroPro must be aware of the many printers that support proportional spaced characters. They're either ignoring the demand or ignoring the importance of the feature. Every month, OCC receives hundreds of inquiries and phone calls asking how proportional spacing is implemented. No doubt MicroPro has received thousands.

Before we go further, let's define what true proportional spacing means.

In typeset print, as appears on this page, note how the wide letters are given more space than thin letters. For example, W or M are fatter than i or e—so the W and M are allotted more horizontal space on the line. In other words, the pitch of the characters varies according to actual physical dimensions.

In print that is not proportionally spaced, each letter is given the

same amount of space regardless of its "real life" size. With 10 pitch characters, that space is 1/10th inch. With 12 pitch it's 1/12th inch and so on.

It is possible to use WordStar with a printer that has a built-in proportional space character set. That's fine, but the margins will be grossly uneven. A line with many wide characters—containing several capitalized words, for example—will extend past the normal right margin boundaries. Therefore, right-justified print is difficult with proportional spaced characters when used with WordStar 3.3. (Lifeboat Associates of New York sells a \$195 add-on package for WordStar called *Magic Print* that performs like a typesetter. They say it's only been tested with NEC Spinwriters and Diablo 1640/1650's but may work with other printers that have proportional spacing capabilities. We have a package on order for review and testing.)

To be fair, WordStar 3.3 does provide some significant new features.

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The INSTALL program lists an updated menu of printers, a menu driven printer patcher, and a menu of changeable WordStar default values.

WordStar brings aboard the column block move. MailMerge adds several conditional expressions such as IF, EXCEPT, GOTO and mathematical symbols such as =, <, >, = >. These expressions help select certain records or paragraphs for MailMerging.

WordStar's new features are indeed useful, but I'm still looking forward to the day when MicroPro introduces WordStar 3.xx with proportional spacing tacked on.

**Q: How do you get WordStar to underline an entire clause including the spaces between words? I want WordStar to look like sample 1 instead of the standard underlining of sample 2 using ^PS. I'm using a Brother HR-1 daisy wheel printer.**

- 1) Testing the underline command.
- 2) Testing the underline command.

A: The Brother HR-1 does not have an underlining code that can be patched into WordStar that enables underlining of blank spaces. So instead, use the overprint next line sequence "control P return" and manually insert underline characters. This is how it appears on your screen (the ^P is invisible):

Testing one, two ^P<ret>

The ^P return command overprints the line it is located on with the contents of the next line. Note the line number at the top of WordStar's screen stays the same when moving back and forth between the two lines, providing proof that the two lines are indeed operating as one.

**Q: Why is it that some of my SuperCalc cells are behind by one calculation giving me the wrong cell totals? Shouldn't SuperCalc re-total columns and rows automatically?**

A: You've discovered an interesting SuperCalc phenomena called "order of recalculation."

SuperCalc performs calculations in a certain order. The default order is row by row starting with row 1 then row 2 etc. (We'll discuss later how this order of recalculation can be changed.)

This process is best explained by an actual SuperCalc example. Set up a spreadsheet something like this:

	A	B	C
1	10	A4	
2	25		
3	50		
4	SUM(A1:A3)		

Note that the sum in A4 (85) is equal to B1. Now change A1 to some other number. Note now that B1 is wrong, but A4 shows the correct sum.

Now change A1 to 5000. Note that B1 changes this time, but the value is for the previous calculation! Continue on in this process to convince yourself that the value in B1 always remains one calculation behind. When you want B1 to be correct, press the ! key to force another calculation. A4 and B1 should show the same number.

Because of the row-by-row method of calculation, SuperCalc went over cell B1 before it had a chance to look at the cell it's referencing (cell A4). For our example, it would be better to force SuperCalc into a column-by-column mode of calculations using the little known /GC(olumn) command. Its counterpart is the /GR(ow) command.

It is possible to create a spreadsheet where neither order of calculation provides the correct values in some cells. Here's an example.

	A	B	C
1	36		A1
2			
3		C1 + A4	
4	A1		

No matter which way the order of calculation proceeds—row by row or column by column—the value in B3 will be wrong. Use the ! key in cases like this to force a recalculation and to ensure accurate values.



**Q: My objective is to change the default value of WordStar's paper length to 60 or 51 lines upon boot-up without having to use the .PL Paper Length command. The problem is this: When I change the default paper length of 66 lines (address 0367) to some other value, why doesn't the page break line change? I'm using WordStar 2.26 internal labels published in your Dec '82/Jan '83 issue.**

A: WordStar has two addresses for paper length. Address 0367 is the paper length in lines and address 0368/0369 is the paper length in 1/48ths. To see the proper page break, alter the value in the 0368/0369 address, although it's not quite that easy. Novice users should not bother with changing WordStar's internal page length default value; stick with the .PL command.

Here's how this tricky patch is performed (using the default value as an example):

- 1) Convert lines per page to inches. There are six lines to the inch, so 66 lines = 11 inches.
- 2) Multiply 48 × page length in inches to get the total number of 1/48ths. 48 × 11 = 528.
- 3) Convert 528 into hex. This simple MBASIC program does the trick:

```
A$ = HEX$(528)
PRINT A$
```

- 4) The hex value of decimal 528 is 210. Using WordStar's INSTALL patcher, place the least significant byte (10) in address 0368 and the most significant byte (02) in address 0369—in other words, the bytes are reversed.

I worked out the details for your requirements of 60 and 51 line page lengths as shown in Figure 1.

Page Length	Lines	48ths	48ths in Hex	0368	0369
11 inches	66	528	210	10	02
10 inches	60	480	1E0	E0	01
8.5 inches	51	408	198	98	01
7 inches	42	336	150	50	01

Figure 1

**Q: My Osborne modem gets heavy use as a telex terminal. How can AMCALL print files simultaneously to their being received?**

A: Sorry—AMCALL does not come with printer drivers. Simultaneous printing/receiving is not supported or advertised. Nevertheless, it does work well with the Okidata 82A parallel printer and possibly a few other parallel printers, but not with the Epson.

To get it to work, zip to CP/M (ESC Z), toggle the printer on ("P"), and zip back to AMCALL (AMCALL -Z).

**Q: How can I avoid having the ERROR message displayed within a SuperCalc spreadsheet?**

Here's what happens. Some of my cells have zero values while they await user input. If that zero cell divides into another cell, an ERROR flag pops up on the screen. No harm is done, but it looks unprofessional and it may frighten the user into thinking that there is something wrong with the spreadsheet.

A: Use SuperCalc's little known NA command on cells that give ERROR messages before that future input takes place.

The error condition occurs thus:

	A	B	C
1	56.9		
2			
3	A1/A2		

	A	B	C
1	56.9		
2			
3	ERROR		

Dividing by zero is mathematically impossible. To correct, place NA (without beginning quote or dividing slash) in cell A2. On the screen,

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it ends up looking like this:

	A	B	C
1	56.9		
2	N/A		
3	N/A		

When the user inputs the appropriate data into cell A2, both N/A symbols disappear.

**Q: Would a negative ion generator damage my Osborne or my disks?**

A: Albert Barsimanto, president of Air Ion Devices, Inc., says there are two principal types of ionizers: bipolar ionizers and straight ion generators. Negative ion models can create indirect static problems through charging a rug, for example, and ultimately transferring the charge to the weary user walking across the floor. Touching a file laden diskette with such a charge may be harmful to your mental health.

Bipolar ionizers create less static problems and are preferred by Barsimanto over negative ion models. (Bipolar units remove and collect small dust and smoke particles from the air.) Barsimanto recommends keeping ion devices at least three to four feet away from computer equipment and supplies.

**Q: I believe that my WordStar/MailMerge software is defective or bugged. Mailmerge does not reliably process the Left Margin (.LM) command when Print Time Line Formatting is turned on (.PF ON:). The first line of text after a carriage return is always indented by twice the value of the .LM command (.LM 10 gives a 20 space indent; .LM 15 gives a 30 space indent). Worst of all, the printer occasionally overstrikes text. (No line feed on carriage return?)**

This is my test file:

.PO 0  
.PF ON:  
.LM 10 (Left Margin 10)  
.RM 70 (Right Margin 70)  
(Insert several paragraphs of text.)

.LM 5  
.RM 45  
(Insert more text.)

**For the record, I'm using a C.Itoh 8510A dot matrix printer and single density computer.**

A: Get out the Raid. It looks like you found bugs in the software, and possibly the printer.

I ran that file on a NEC 8023, which is basically the same printer as the 8510, and saw the same overstriking gibberish after printing two or three paragraphs. In testing four printers, the NEC 8023 was the only one that came up with that problem.

The problem with the indenting of the first line after a hard carriage return is a little more interesting. It occurs with a variety of printers (both dot matrix and daisy wheel) except it works perfectly with the Okidata 82A. In fact, the Okidata 82A processed all the Print Format commands perfectly—no indents, no overstriking.

However, for the most part, .LM does not work as documented. In addition to the indenting problem, it may be affecting proper operations with the NEC/C.Itoh printer buffer.

Fret not, dear reader, there is a way home. Instead of .LM, why not use the Page Offset (.PO) command? It accomplishes the exact same task, and performs its duties without error regardless of printer type. Experiment with it and see. Also, try using the output justification (.OJ) and input justification (.IJ) commands. When print time formatting is on, lines are reformatted to conform to the existing margins. See your manual for further details. (The Executive manual is in error. MicroPro no longer uses the .LM and .RM commands in WordStar 3.3. Instead, it relies on .PF, .OJ and .IJ commands for customizing margins.)

**Q: Your article "I/O I/O Part Three" states that I can get a true boldface shadowstrike command with my NEC 3515**

**printer if I install it for a Diablo 1640/1650 printer. Well, everything works okay except shadowstriking only works one line at a time. I cannot input a single code at the beginning of a paragraph with the closing code at the end. I must key in the code at the beginning of each line. I would appreciate your assistance in getting this final glitch out of my system.**

A: Look on page 4-30 in your NEC Spinwriter manual (October 1981 printing). It reads:

"ESC W. Enter Auto Shadow Print Mode. Enters mode where all subsequent printable characters are struck with 1/120th of an inch of carriage movement between strikes and no intervening paper movement. Clears with carriage return."

As you can see, the carriage return code clears the shadowstrike command. However, I tested shadowstriking on the 7720 and the command was not cleared with a carriage return, although the manual says so. Be advised of this discrepancy.

The NEC printer manuals do not discuss these codes in hexadecimal format. To make them applicable for WordStar, use the following table:

NEC 3510, 7710, 7720

Shadowstrike on: 1B 2B  
Shadowstrike off: 1B 2C

NEC 3515, 7715, 7725

Shadowstrike on: 1B 57  
Shadowstrike off: 1B 26

Install it into the patch area of your choice.

**Q: Where might I find communications software for the Executive?**

A: At the time of this writing there are just two sources of communi-



cations software for Executive computers. I expect by publication date others to be available including one authorized by Osborne Computer Corporation (OCC). However, that's speculation—and I would rather deal with facts.

Available for \$99 is the "Executive Communications Package" from the Wizard of OsZ folks located at 9614C Cozycroft Ave., Chatsworth, California 91311, phone number (213) 709-6969. Their 300/1200 baud multi-functioned software comes with the following files: RCPMLINK, SYSLINK, TLX-LINK, SYSTOSYS and FAST-LINK. It can be used to communicate with the Source, Micronet, Tellenet, public boards, remote CP/Ms (RCPM) and mainframes. Contact Wizard of OsZ for further product information.

A public domain Executive communications file going by the name EXMDM11.OBJ (MODEM7 version 11) is currently spreading like wildfire to user group and public bulletin boards about the country. The file name may be different from one bulletin board to the next so see your local users group or RCPM bulletin board system operator for additional information.

**Q: How is WordStar's "Find and Replace" command (^QA) used on printer control codes?**

A: ^QA can find and replace some print control characters, but not all. It works on the following commands: doublestrike (^PD), boldface (^PB), other ribbon color (^PY), overprint character (^PH), phantom rubout (^PG), phantom space ^PF, printing pause (^PY), all user functions (^PQ, ^PW, ^PE, ^PR).

The trick to finding/replacing these control commands is to press down the CTRL key for each character in the command line. For example:  
FIND? ^P^D  
REPLACE WITH? ^P^B  
OPTIONS? GN  
This example finds all double-

strike codes and replaces them with boldface. THE ^P does not appear on the screen, but it is registered.

By the way, immediately after pressing the RETURN key from the options menu press the ESCAPE or spacebar key to speed up the finding and replacing operation. Instead of showing the substitutions/deletions on the screen, the work is performed off screen.

Deleting a control code in a file without substituting another one is performed by pressing RETURN when prompted with REPLACE WITH?

**Q: I'm working with a lengthy SuperCalc spreadsheet and find it annoying that a calculation is performed after every input. This slows me down tremendously—each calculation update takes ten seconds to perform in my mathematically complex file.**

**Is there a way to disable it so that data can be input quickly?**

A: Yes. Use the /GM(annual) command to eliminate automatic forced calculation after every entry. When you want a calculation, press the ! key. Use /GA(automatic) to get back to the default value.

*All questions directed to the Wizard column are carefully read and reviewed. Unfortunately, space does not permit publication of every question and time does not always permit personal replies to letters not accepted for publication.*



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# Thar's GOLD in them thar hills

*Computer "prospectors" like Eric Ruff are striking it rich with a combination of Yankee ingenuity and dogged determination to create markets where once there were none*

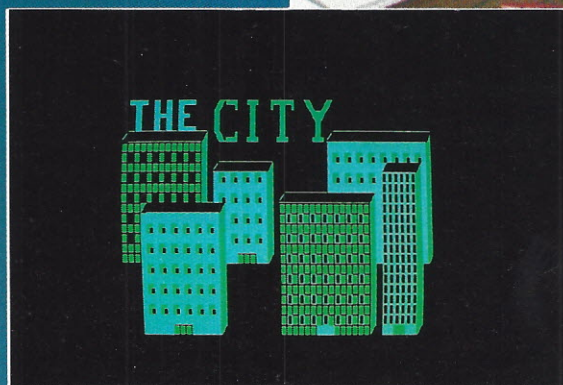
**Kyle Pierson**

Someday, in the middle of your monthly ledger, when you least expect it, an urge to use graphics will overcome you. You'll feel compelled to put a box around the bottom line figure, or make a fancy cover sheet for your annual report...

It happens to almost everyone, and it happened to Florida attorney Eric Ruff. But at the time, the Osborne graphic symbols were still buried deep within the *Osborne User's Guide*. So Ruff decided to start prospecting.

He'd hoped to mine out just enough graphics symbols from the *User's Guide* to make a calendar grid. But Ruff never expected the "Eureka, I think I've got it!" experience that led to the creation of his hugely successful SuperGraphics program. He found he'd hit software gold.

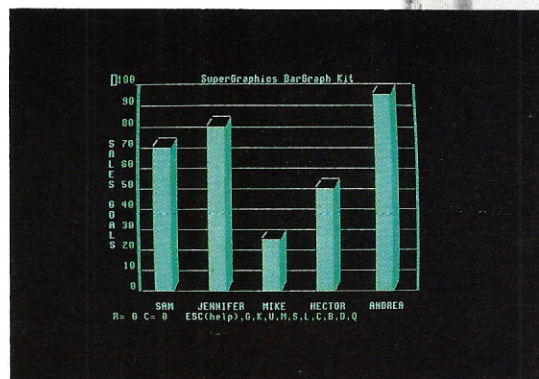
The actual creation of SuperGraphics was simple enough. But before stumbling upon its secret, Ruff fell down mine shaft 61440. Into that MBASIC address, Ruff plugged the top left-hand corner symbol to mark the beginning of his calendar grid. From then on, he was like a postman trying to deliver mail to random addresses all over the city. All he knew was that the first box was marked 61440, and that 128 houses were on the block, with 32 rows of blocks to choose from. That meant he had to add, subtract, multiply and divide his way from one address to the next. Faced with that task, most people would have











gone to the nearest stationery store and shelled out five dollars for a calendar.

But Ruff stuck with it all day and into the next. After 48 hours of working math problems he was finally ready to run the calendar program. All the blocks and corners fell right into their assigned places, forming the calendar grid as they went. And even the numbers appeared in the upper left-hand corner of the box. But the whole design was two spaces off center. Ruff took a deep breath, corrected the program, and solemnly vowed never to fool with the Osborne graphics characters again.

Well, he didn't. At least not in the same way. Every good idea has to start somewhere. And, really good ideas have a way of hiding behind the obvious. Ruff's exasperation

with the calendar building experience lead to the question, "Why can't this be done in reverse?" That process reversal was the beginning of Ruff's second experiment with programming graphics, eventually christened "SuperGraphics."

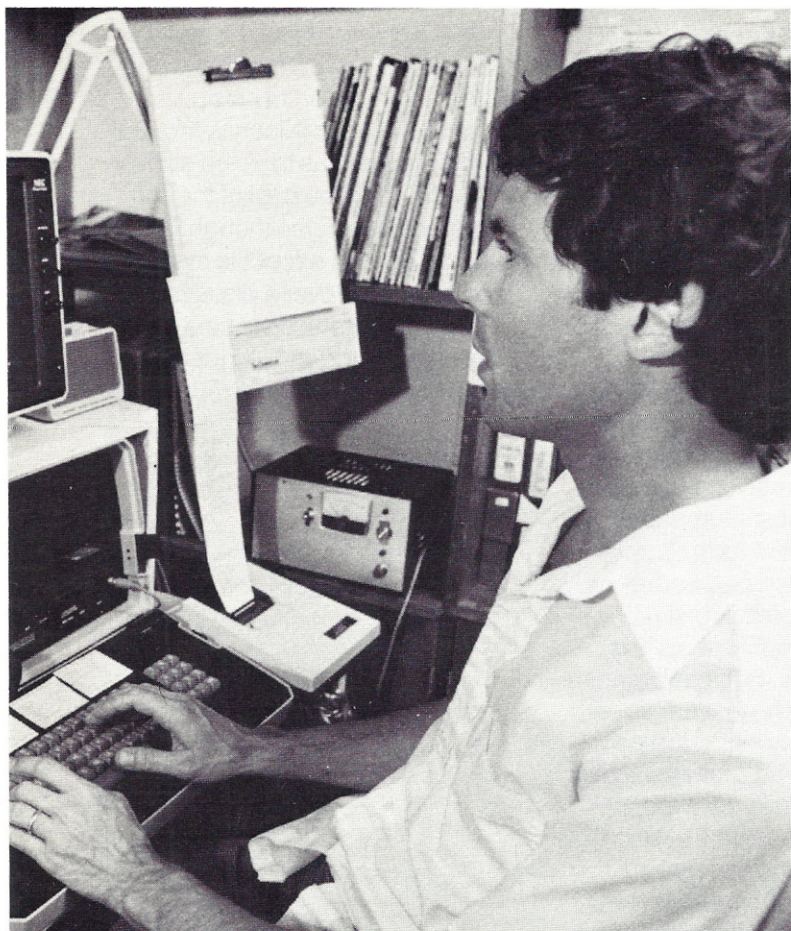
It took Ruff three months to prepare the program for marketing. "In the beginning, I had three all-nighters. One week I slept only 11 hours," he said, explaining how quickly programs become outdated because the market moves so fast. And indeed, by the time SuperGraphics was ready to advertise, other Osborne graphics programs were also on the market. But, he said, he decided to out-market his competition.

"I wanted the whole thing to be a class act. I wanted black print on a gold label and clear plastic store

packaging," he said. Ruff's marketing plan was more than just another pretty label. His slide show-type demonstration disk is so slick it rivals the best of Madison Avenue advertisers. At first, the slide show features rather ordinary graphic designs: a flag, bargraph, and cards. The designs progress into more complicated, impressive images, like his city.

But his finale tops the show. Imagine the fate of the business executive whose overnight delivery service fails to arrive on time with his 10 o'clock presentation. He could face a firing squad, or be forced to walk the plank. Ruff might have condemned the hapless junior exec to either of these fates, but instead he chose an 18th century French guillotine as the method of execution. Ruff's victim most graphically suffers a fatal, on-






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screen blow to the neck. Spectators of the gruesome event seem to love it. "Someone at a computer fair in Alaska called to tell me my demo disk was the hit of the show," he said.

The demonstration disk is designed to show off SuperGraphics' most impressive feature. "The movies" feature is actually several single-image programs strung together. When APG successively runs the programs, it creates the optical illusion of moving figures.

Ruff relied on packaging a second time when he sent SuperGraphics to ComputerLand's executive offices. He wanted the company to review the program and consider it for their product line. He cleaned up the cover of a spare corporate record book with special black paint and put a SuperGraphics label on it. Inside,

he gave a page-by-page written presentation of SuperGraphics' main features. The pages were inserted into clear plastic sheets, the sections separated by dividers. He covered every aspect of SuperGraphics, from the manual, to advertising, to SuperGraphics Mate (the printer program). And, of course, included samples of each. Ruff was shocked when the company requested 10 more books. He made them up in an afternoon, by hand.

Ruff tested a very early version of SuperGraphics on the Osborne User's Group of which he is now president, the Suncoast User's Group in Plant City, Florida. The program impressed some pretty sophisticated members, he said, and then he knew he had something. He sold a few copies to some members at \$20 a copy. That

gave Ruff the idea to send his program to other user's groups for review. He thought he had more to gain than lose.

"Loosen up, take risks—if they screw you, they screw you," Ruff advises other programmers. He said he was glad he took the risks he did. And for good reason:

"The documentation was delightful compared to most that I have read. I was able to read the whole booklet in less than an hour and felt if the software was half as good as the explanation of how to use it, I would be happy. The software was even better than I expected," wrote Carolyn Sioris in *A Bit More*, the December 1982 issue of the Nova Osborne User's Group newsletter.

Aside from excellent documentation and perfect performance, another reason for SuperGraphic's



success was its shockingly low price. Ruff said he initially hoped to sell 100 SuperGraphics programs at \$29.95. He now sells thousands. The program was priced low, he said, to discourage people from giving it away, or stealing it. Ruff includes a friendly notice in the manual warning against making "a free copy for your friend."

"I'd rather sell three at \$29, than one at \$89," he said, referring to a retailer who was selling SuperGraphics for \$79.

Ruff said much of his profits go to advertising. The first few months of business took all his profits, in fact, to buy advertising space. He describes his most triumphant marketing moment as the day ComputerLand signed SuperGraphics to its product list.

Now that SuperGraphics is a rousing success, Ruff can't remember the last time he played his set of drums. And his backyard pool is bone-dry. But he's fully using his talents as an efficiency expert. He's finished the 107-column version 4.1, added a printer program called SuperGraphics Mate, and is always looking to improve the program.

Although he finally hired a friend to handle shipping and receiving, he relies on MailMerge and his answering service to keep his records straight. Ruff picks up the day's orders by modem. The orders come in on what looks like an adding machine; it spits out a ticker-tape of names, addresses and phone numbers. As he keys the information into MailMerge, it falls right into place on a master order form. MailMerge takes care of Ruff's mailing labels, and at the same time, makes an individual label for each diskette mailed to the customer.

After that, the whole operation moves to the dining room. Its only piece of furniture is a metal folding table pushed against the wall. Stacked on the table are manuals, in and out boxes for orders, tape, and other essential mailing items. The packing department is under-

neath the table. Labels, cardboard stuffing, envelopes and demo disks are all kept there.

Ruff Software Inc., is located on Spirit Lake, just outside Lakeland, Florida—the heart of orange juice country, far from Silicon Valley. But Ruff Software has traveled all over the world with the best of the software bundles. Even though Ruff said he doesn't expect to ever again stumble over a discovery like SuperGraphics, he said he has other programming ideas he's ready to try. □



Photo by Dave Pierson



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# Automate your correspondence

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*Answering letters while the thoughts are still fresh requires only a few WordStar files—and the impetus to send them out as fast as they hit the incoming mail slot.*

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**Richard Drakeford**

One chore often delayed or avoided before the advent of computers was personal correspondence. Now, by devoting a disk to the task of letter-writing, computer assistance can make correspondence duties easier to perform—so smooth that letters may even get sent out on time. Here's how easy it can be with the proper set-up:

Load WordStar. Put correspondence disk in Drive B and log on. Enter SEPLTRS file (this example filename assumes this is the month of September) and jump to the end of the file. Start a new page and enter the text only of the letter to be written. Disregard those oft-repeated details of letterhead, date, inside address, salutation, complimentary close, signature block. Just write (and edit) only the text.

When finished, mark the new text as a block and hit a special function key (explained in your User's Guide) which copies it to an existing file named TEXT and overwrites the previous material in the file. This

single keystroke also saves the original text at the end of the SEPLTRS file where it was written and exits that file to the main WordStar menu.

Use N to enter a file called MAILLIST. Use ^QF and enter the last name (or any other identifier) of the addressee if he/she is already on the mailing list. If not, enter the name at the end of a permanent mailing list. Hit another pre-arranged special function key (SFK) which copies the addressee's data out of the mail list to another working file and returns to the main menu.

Turn on the printer. Hit "M" to Merge-print a file called BLETTER. Hit the escape key. The computer will now prompt for the date. Enter it. Then it will prompt to load an envelope in the printer. Do so and hit "P" to print it.

After the envelope prints, the computer will then prompt to load paper for the letter. Do so and hit "P" again. The letter will be printed complete with letterhead, date, an

inside address block, a salutation, text, a complimentary close and a signature block.

The result is a letter printed on paper, an addressed envelope in which to mail the letter and a file of the text only (which conserves disk space). The whole procedure takes less than seven minutes from a cold start plus the time it takes to write the text of the note. Subsequent letters to other addressees require four minutes (plus time to write text) since boot-up is already completed.

## **An overview**

Those who care to organize such a correspondence disk can use this overview to open the following files:

- A mailing list file of all personal correspondents, from Mom to the VISA account, to the bail bondsman.
- A file which contains letterhead configured for normal stationery.
- One or more big files which contain the text (and only the text) of



all letters mailed in the current week or month. Each letter can be headed by a single-line dot command format comment which won't be printed out but can be searched for later to locate the letter. Such as: "...to Dad, re: money, 9/15/83."

- A Merge-print command/format file, BLETTER, (or PLETTER) (see page 34), which assembles all the required elements when the current letter is printed to paper and formats those elements correctly.
- Two working files used by the Merge-print file which contain the data for one letter only: at any given time they contain the data used to make up the last letter sent out. When another letter needs to be sent, use the special function keys to load the current information into working files. The working files are: first, TEXT—the file containing the text of the current letter; and second, MAILEE which contains the mailing list data.

## Running the operation

The whole trick is to make sure that those working files contain the proper current information for one current letter before Merge-printing it. And two SFKs are used to move the right data into those two files.

First copy the finished text to file TEXT in the main correspondence file (SEPLTRS, for example) where the text will be permanently filed. Copying to TEXT overwrites and obliterates the last letter that was in there. A copy of all texts is always retained in SEPLTRS.

One keystroke does all this when a SFK is set up as follows:

```
^KWTEXT<CR>Y^KD
```

The current name and address data is put into the file called MAILEE by going into the mail list data file, putting the cursor on the line which holds addressee information and hitting a SFK programmed as follows:

```
^QS^KB^X^KK^KWMAILEE;
<CR>Y^KQ
```

Add new addressees to the mailing list file (save by ^KS) before executing the above; this saves keystrokes if the address is needed again. Merge-print using the command/format file BLETTER.

## Letter text lengths

The method outlined above works just fine with a one-page letter. Up

to 34 lines of printed text (counting the blank lines between paragraphs) can be included and still leave room for headings and ending on a standard 11-inch piece of paper. I keep my text files 52 characters wide for convenient viewing, and find that about 40 lines of 52-wide text will break down into around 34 lines in 65-wide format. Thus letters shorter than 40 lines (52-wide) can be dashed off without worrying about page breaks.

Problems do arise when the let-

### Business letter command/format file

```

1  .."BLETTER" Merge-print command file to print
2  ..a business letter to a current correspondent.
3  .pl 20
4  .mt 0
5  .mb 0
6  .op
7  .pf on
8  .rm 65
9  .oj off
10 .df MAILEE
11 .rv companyname, attn-name, salutationname, streetad
12 .rv citystatezip, phone, notes
13 .av "Enter date now: ", date
14 .cs Load envelope into printer.
15 ^PC
16
17
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50
51
```

&companyname&  
&streetad&  
&citystatezip&

&attn-name/O&

&date&

Sincerely,  
RICHARD DRAKEFORD

Listing 1



ter is longer than one page. The page must be broken at the approximate correct length and the printer stopped so the next sheet of paper can be loaded. This must be done in the original letters file while writing the text of the current letter. A .pa page break must be inserted manually after about 45 lines (or less) of 52-wide text, and the second page started with a ^PC printing control character, which stops the printing operation for paper change at that point while Merge-printing.

Where the lines will break and exactly how many lines to the page won't be known before the fact—the computer handles line-forming at printing so text can be kept at 52 characters for viewing—but approximations are usually good enough. Of course, if the 80-column optional upgrade to the O-1 is installed, that format can be worked with on-screen.

If the exact format of the printed letter is very important—perhaps a letter to a fiancée's father to borrow money—the results can be previewed by Merge-printing to disk before making a commitment to paper. In fact, test-printing to disk the first few times the system is run is a good idea, to see if any bugs have popped up during installation.

If the letter is going to run more than two pages, it's a project and not a short letter—and is probably best handled in a file of its own, pulling in the letterhead from the LTRHEAD file and typing out the address and salutation.

### Bugaboos

As with all Merge-print operations, it is important to be fastidious about extra invisible characters in various files. When text blocks are marked for transfer, the beginning of the block must be marked at the beginning of the first line included in the letter, not on a blank line above it. The text must be ended with one carriage return only, then marked as the end of the block. (One blank line precedes and follows the text block insert in the command file.

Those blank lines are part of the command file, not the text file.)

### System installation

The simplest way to install the system is to use the Osborne SETUP program to put an SFK on the WordStar disk that will customarily be used for correspondence. If the regular WordStar disk is already loaded up with other SFKs, however, it may be necessary to install the correspondence special functions on a correspondence files disk.

When special function keys are not on the WordStar disk and it's time to do some letter-writing, use the following roundabout procedure.

Turn on the computer (or reset). Put correspondence disk with the correct SFKs installed in Drive A. Boot up. (This puts the system with the right special function keys in memory.) Put that disk in Drive B and put the regular WordStar disk in Drive A. Execute a ^C to let CP/M know the disks have been switched (so the WordStar disk can be written to should the need arise). At the CP/M prompt, invoke WordStar by typing WS<CR>. (This starts WordStar without booting the system on the WordStar disk, which has its own set of SFKs.) The correspondence special functions remain in memory. After logging onto Drive B, a letter can be input to the letters file.

### Managing the mailing list

It is always convenient to keep one big all-inclusive mailing list for friends, businesses, and family. A WordStar mailing list is a data file of variables. Variables are nothing more than containers for data such as names and addresses.

It is okay to have two different kinds of addressees on the one list—if the command files which read the data will only read them one record at a time, and will always read the variables in the same order they are written on that particular record/line. For personal

friends, these first three variables can be used: lastname, firstname, salutationname-wife. For businesses, a different first three can be used: companyname, attn-name, salutationname.

For both business and personal correspondents, the record then includes: streetad, citystzip, phone, notes. If care is taken never to print an envelope or letter to a personal friend using the BLETTER format and vice versa, all addresses can be kept in one big mailing list.

From that one big list it is easy to generate smaller special purpose lists when necessary. Just copy the monster list to a new file and delete everyone who won't be applicable. For example, when making Christmas card lists, copy the whole list and delete such inappropriate correspondents as Sears Roebuck and Montgomery Ward.

Someone more fussy might want to keep two lists: one for business and one for personal correspondence, a BLIST and a PLIST perhaps. That doesn't matter to the letter-assembling system, as long as the appropriate data record is sent to the working file MAILEE for printing.

### Advantages summarized

One day perhaps all correspondents will have computers of their own and all communication will be electronic. In the meantime the drudgery of hardcopy correspondence can be kept to a minimum by keeping a mailing list of everyone who might someday need writing to. That way a name and address need only be typed once in a lifetime. After that an addressee can be designated using a single-stroke SFK.

The computer can—and should—take care of the repetitious formatting stuff such as letterhead, inside address, salutation, envelope addressing.

Now write those letters!  
*Richard Drakeford last wrote for us on "Practical Editing" in the April/May and June issues.*



## The command file: a detail

The Merge-print command file used for business correspondence is contained in Listing 1. Here is a line-by-line explanation of the Merge-print command file called BLETTER.

**Lines 1 and 2:** Information only, configured as double dot command comments which won't print.

**Lines 3, 4, 5:** Establish paper length (vertical) for printing an envelope on an Epson MX-80 printer, using 3 1/2-inch high envelopes. Adjustments have been made to account for loading position of the envelope, top edge one inch above the print head, and for enough line-feed from printer to kick the envelope past the roller when finished.

**Line 6:** Turns off page numbers.

**Lines 7, 8, 9:** Merge-print dot commands to reform text from 52-column disk file to 65 columns when printed to paper: .pfon turns on this feature, .rm65 establishes the right margin for printing, .ojoff turns off right justification.

**Line 10:** Tells Merge-print scanner which data file holds variable address data, here called MAILEE. MAILEE is a working file containing data for one correspondent only: the person/organization to receive this letter. This data was entered via a SFK operation which grabbed it out of the regular all-inclusive mailing list file.

**Lines 11, 12:** Read the data variable information out of data file in order given, here shown in business letter format. The attn-name variable holds specific name or position title at the addressed business and perhaps is empty in the address file. If empty of data it won't print.

Salutationname is the greeting, following the word "Dear." Examples: Senator Soaper; Sirs; Bob.

Phone numbers for correspondents can be kept in the mail list, and an updated phone list can be printed out when desired. The scanner can read that variable

even though it is not printed out for this particular application.

Similarly, mailing list notes can be useful; they could be credit ratings such as "deadbeat" or "slow-pay." Since the variables "phone" and "notes" aren't printed in letters and because only one correspondent's information at a time occupies the working file MAILEE, they just would be left over and obliterated when the next batch of data comes into the file.

**Line 13:** The ask for variable command, .av, prompts at print time so the scanner can obtain the data for a particular variable, here the date for the letter. The message "Enter date now" appears on the screen.

**Line 14:** Dot command .cs, for clear screen and a message, prompts for envelope loading.

**Line 15:** PC temporarily stops the printing operation again until the envelope is positioned. Printing resumes when the "P" key is hit.

**Lines 16-21:** (Variable.) These lines may need some tinkering-with to get address variable references correctly positioned for printer and envelopes. In this case, the envelope is loaded in such a way that the printer must feed six blank lines before it prints the address on the envelope, two inches down from the top using six blank lines in the file which "print" by linefeeding when printing is resumed.

**Lines 22, 23, 24:** The envelope width used here, 6 1/2" wide, requires address printing to start in the 27th column—3 1/2 inches from the left side of the envelope (because WordStar puts in an eight columns automatically). The position is reached by physically spacing across.

**Lines 25, 26, 27:** Blank.

**Line 28:** "&attn-name/O&" is not printed unless the correspondence must be directed to a particular name or position title at a business. The "/O" tells Merge-print to skip

this variable if it contains no data.

**Line 29:** .pa ends the page being printed (which is actually the envelope) and feeds the envelope out of the printer.

**Lines 30, 31, 32:** Re-establish paper length for the letter itself. When loading a page, "waste" about an inch of paper above the print-head location. Actual length of the paper is 11 inches but the computer and printer don't know about that wasted inch so tell them (.pl60) that the page is 60 lines (10 inches 6 lines to the inch). Since printing will start right where the paper is, no top margin (.mt0) is specified. One inch of white space is saved at the bottom of each page with a six line margin at the bottom (.mb6).

**Lines 33 and 34:** Another .cs prompts to insert letter paper, and the following PC stops the printer momentarily.

**Line 35:** After printing is resumed, the file insert dot command (.fi) grabs the letterhead file and puts it here.

**Line 36, 37:** A blank line, then the date variable reference positioned (here ) at the top right of page, or wherever desired.

**Lines 38-41:** The address block variable references and salutation. Again, the "&attn-name/O&" variable will be omitted if empty.

**Lines 42, 43, 44:** A blank line, then insertion of file TEXT, loaded with the text of this particular letter to this particular correspondent. A single blank line follows the inserted text.

**Lines 45-51:** Standard close and signature block, positioned to appear where desired (here, halfway across the page). Alternatively the complimentary close could be made part of the text for those who like to vary closings with the tenor of each letter. A carriage return ends the letter and the page and feeds the letter out of printer.

o





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# PRINT CUSTOM LOAN TABLES

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*MBASIC is a capable assistant  
to real estate and loan professionals*

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**Gordon R. Howell**

Certain details about a loan—monthly payment breakdowns, total finance charges, interest portions of payments, and the like—are often difficult for loan officers to provide speedily, on paper, for their clients. The MBASIC program described herein creates professional custom loan tables that produce just such information.

Before entering the program code, examine the summary below to see what the program does.

## **Summary of AMORTABL.BAS**

First the program defines functions, then goes to a subroutine prompting the user to input information concerning the loan.

This information is used either to solve for some of the unknown values, or sent to the table formatter.

The user is then prompted to decide what to do with the data. When enough information has been acquired, the option to print the table is presented.

Then the user is prompted to input "optional information" such as:

DATE, LENDER, BORROWER, etc. All vital (non-optional) information must be input or the program will re-prompt the user for it.

When all parameters are satisfied, the table will be created and printed.

The main subroutine starts on line 1140. This "sub" then calls up the other routines as necessary. Decisions such as pagination, testing for proper balance requirements and so on, are made along the way.

When either the balance has dropped to zero or the preset TERM has been reached, the program properly terminates the table.

Now, using either WordStar or MBASIC, enter the lines as they appear. After this is done, and is checked carefully for errors, try running the program (with MBASIC). Many "help prompts" are built in. (For ready-to-run programs, see the end of this article.)

## **Entering code with MBASIC**

Use of MBASIC offers the conve-



nience of automatic line numbering.

First, load MBASIC: press RESET, place a copy of MBASIC in Drive A and press RETURN.

Type in the program exactly as it appears in Figure 1.

Using the MBASIC editor, correct any mistakes.

SAVE the program with "A" option by typing: SAVE "B:AMORTABL",A. Run the program.

### Entering code with WordStar

This might be easier for some readers.

Caution: be sure to put the cursor at the end of the file before saving it. Not doing so could cause problems.

First, use the "N" option to enter the code (name the file AMORTABL.BAS). When all errors are corrected, save the program and exit WordStar. Include the line numbers.

Insert a copy of MBASIC in Drive A, press RESET then RETURN. When MBASIC has loaded, type: LOAD "B:AMORTABL".

Run the program and follow the prompts on the screen. Vital information about the loan includes:

1) loan amount, 2) interest rate (percent per year), 3) number of months over which the loan is amortized, 4) payment per month, 5) term of the loan, if there is a balloon payment involved.

This program could do many more things. Thus the "source code" is included here, so it can be customized to each user's individual needs. The calculated (table) results are very accurate.

It should also be able to solve for interest and annual percentage rates (APR). These features have not been added to the program. If you have a need for them, you may want to experiment with the program.

### Operating instructions for AMORTABL.BAS

Load MBASIC in Drive A. Put disk with AMORTABL.BAS in Drive B,

### "AMORTABL.BAS"

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1 REM This program 'AMORTABL.BAS' is copyrighted (c) by:
2 REM FREEDOM SOFTWARE CO. / FREEDOM FOUNDATION - SYLMAR, CA.
3 REM This copy has been presented to THE PORTABLE COMPANION,
4 REM for use in an article on how to use the program.
5 REM
6 REM COMMERCIAL USE IS PROHIBITED....however, private use
7 REM is allowed, provided it is not for profit.
8 REM If you want to use it commercially, contact the
9 REM FREEDOM SOFTWARE CO. at 213-362-4200.
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850 IF LIN>40 THEN IF FNA(BAL#)>0 THEN GOSUB 780
860 STI#:=0 : STPMT#:=0 : STPRN#:=0 : RETURN
870 IF FNA(BAL#)=0 THEN RETURN
880 LPRINT "BALANCE of";LPRINT USING "$#####.###"; BAL#;
890 LPRINT " is NOW DUE ("MO"/"DY"/"YR") and payable."
900 LPRINT : LIN=LIN+2 : RETURN
910 IF FIN#>0 GOTO 920 ELSE LPRINT SPC(33); : GOTO 940
920 LPRINT "PREPAID Fin. Chgs.:";
930 LPRINT USING "$#####.###";FIN#;
940 IF TERM>0 GOTO 950 ELSE LPRINT :GOTO 960
950 LPRINT " TERM of the LOAN is ";TERM;" MONTHS."
960 LPRINT "AMOUNT FINANCED:";$$;
970 LPRINT USING "$#####.###";AMTFIN#;
980 IF FIN#>0 THEN APR#:=RATE#
990 LPRINT " Annual Percentage Rate:";
1000 LPRINT USING "###.###";APR#; :LPRINT "$"
1010 IF COST#>0 GOTO 1020 ELSE LPRINT SPC(33); : GOTO 1040
1020 LPRINT "other costs:";$$;$$;
1030 LPRINT USING "$#####.###";COST#;
1040 IF N=0 THEN LPRINT : GOTO 1060
1050 LPRINT " LOAN is AMORTIZED over";N;"months."
1060 LPRINT "NET CASH TO BORROWER:";
1070 LPRINT USING "$#####.###";CASH#;
1080 IF FV#>0 THEN LPRINT : GOTO 1100
1090 LPRINT " Total monthly payments (FV) = $";FV#
1100 LPRINT : RETURN
1110 LPRINT "PAYMENT "; " DATE";$$;" PAYMENT";$$;"PRINCIPAL";$$;
1120 LPRINT "INTEREST";$$;"INTEREST";$$;" BALANCE"
1130 LPRINT " NUMBER ";$$;$$;"(monthly) "; "(portion) ";
1140 LPRINT "(portion) "; "(accum.) "; "(owed)"
1150 LPRINT : RETURN ' column head
1160 WHILE FNA(BAL#)>0
1170 ON MO GOSUB 40,50,60,70,80,90,100,110,120,130,140,150
1180 MINT#:=MRATE#*BAL# : BAL#:=MINT#+BAL#
1190 IF BAL#<PMT# THEN PMT#:=BAL#
1200 BAL#:=BAL#-PMT# : PMTS#:=PMTS#+PMT# : AINT#:=AINT#+MINT#
1210 LPRINT USING "#####";CNT; :LPRINT MO$;
1220 LPRINT USING "##";DY; : LPRINT USING "#####";YR;
1230 CNT=CNT+1 : PRN#:=PMT#-MINT# : TPRN#:=TPRN#+PRN#
1240 STI#:=STI#+MINT# : STPMT#:=STPMT#+PMT# : STPRN#:=STPRN#+PRN#
1250 LPRINT USING "#####.###"; PMT#;PRN#;MINT#;
1260 LPRINT USING "#####.###"; AINT#; BAL# : LIN=LIN+1
1270 IF MO=12 THEN GOSUB 800 : YR=YR+1 : MO=0
1280 IF TERM=CNT-1 THEN RETURN ELSE MO=MO+1
1290 WEND : RETURN
1300 GOSUB 1320 : GOSUB 1510
1310 I#:=((IN#*(IN#+1)*N)/((IN#+1)*N)-1)) : GOSUB 1320 : GOTO 1450
1320 PRINT CHR$(26); "ALL THE FIGURES NECESSARY TO COMPLETE"
1330 PRINT "THE LOAN APPLICATION ARE:" : PRINT
1340 PRINT "1) LOAN AMOUNT? (PMT*IN) = $";
1350 PRINT USING "#####.###"; PV#
1360 PRINT "2) INTEREST (PERCENTAGE) = %";
1370 PRINT USING "#####"; INTR#
1380 PRINT "3) Loan AMORTIZED for (months) = #";N
1390 PRINT "4) MONTHLY (equal) PAYMENTS = $";
1400 PRINT USING "#####.###"; PMT#
1410 PRINT "5) FUTURE VALUE of loan (PMT*T) = $";
1420 PRINT USING "#####.###"; FV#
1430 PRINT "6) BALLOON PAYMENT is due: (term) = #";T
1440 PRINT :PRINT :RETURN
1450 PRINT "Do you now have ALL the NECESSARY figures?"
1460 INPUT ".....ANSWER Y(es) or N(o) ";X$ : PRINT
1470 IF X$="Y" THEN PRINT : GOTO 1660 ELSE GOSUB 1490
1480 GOTO 1450
1490 INPUT "PRESS THE NUMBER YOU WISH TO ALTER:";B
1500 ON B GOSUB 1720,1730,1740,1750,1760,1770 :GOSUB 1320 :RETURN
1510 PRINT :PRINT "ENTER the items you can:"
1520 INPUT "DO YOU WISH TO SAVE THE ABOVE DATA?";Y$
1530 IF Y$="Y" THEN RETURN ELSE IF Y$="y" THEN RETURN
1540 INPUT " LOAN AMOUNT: $",PV# :PRINT
1550 IF PV#>0 THEN GOTO 1540
1560 INPUT " INTEREST (percentage): %",INTR#
1570 IF INTR#>0 THEN GOTO 1560
1580 IN#:=INTR#/1200 : PRINT
1590 INPUT " LOAN is AMORTIZED over (months): ",N :PRINT
1600 IF N=0 THEN GOTO 1590
1610 INPUT " PAYMENT (per month): $",PMT# :PRINT
1620 IF PMT#>0 THEN GOTO 1610
1630 INPUT " BALLOON PAYMENT is DUE: (month) ",T
1640 IF T=0 THEN T=N
1650 RETURN
1660 INPUT "DO YOU WISH TO MAKE A 'TABLE' OF THE LOAN?";B$ :PRINT
1670 IF B$="Y" THEN PRINT CHR$(26) : GOTO 180
1680 IF B$="y" THEN PRINT CHR$(26) : GOTO 180 ELSE GOTO 1690
1690 INPUT "Do you want to RECALCULATE the loan ?";C$
1700 PRINT CHR$(26)
1710 IF C$="N" THEN PRINT "...BYE" : END ELSE 1310
1720 INPUT "ENTER new LOAN AMOUNT: $",PV# :RETURN
1730 INPUT "ENTER new INTEREST: %",INTR# :RETURN
1740 INPUT "ENTER new AMORTIZATION #",N :RETURN
1750 INPUT "ENTER new PAYMENT: $",PMT# :RETURN
1760 INPUT "ENTER new FUTURE VALUE:$",FV# :RETURN
1770 INPUT "ENTER new TERM: #",T : IF T=0 THEN T=N :RETURN
1780 ' end of program

```

then type: LOAD

"B:AMORTABL.BAS" <CR> after "OK" prompt. Type: RUN <CR>, and follow the on-screen prompts. The example data listed below can be completed with different information.

- Prompt: "DO YOU WISH TO SAVE DATA?" Answer with: <CR>
- Prompt: "Loan Amount?" Answer with: 20000 <CR>
- Prompt: "Interest rate?" Answer with: 18.5 <CR>
- Prompt: "Amort months?" Answer with: 180 <CR>
- Prompt: "Payment?" Answer with: 330 <CR>
- Prompt: "Balloon payment due (Term) in months?" Answer with: 18 <CR>
- Prompt: "Do you have all necessary DATA?" Answer with: Y <CR>
- Prompt: "Do you want a table of this DATA?" Answer with: Y <CR>
- Prompt: "Date of Loan?" (optional data) Answer with: 11/22/83 <CR>
- Prompt: "Lender?" (optional data) Answer with: City Bank <CR>
- Prompt: "Borrower?" (optional data) Answer with: John Doe <CR>
- Prompt: "Prepaid Finance Charges?" Answer with: 600 <CR>
- Prompt: "Other costs?" Answer with: 125 <CR>
- Prompt: "Annual Percentage Rate (APR)?" Answer with: 19.2 <CR>
- Prompt: "First payment due?" Answer with: 12,22,83 <CR> (Use of commas is mandatory.)
- Prompt: "Printer ready?" Answer with: <CR> (This signifies "yes," so be sure it is.)
- Prompt: "Print table?" Answer with: Y <CR>

The printer should now start spilling out the requested table. Look at the print-out on the next page.



Author's note: Restricted personal use is hereby granted to those individuals who hand-enter the program in this article, provided all copyright notices are retained and program is not used commercially. Those wishing to use the program

for commercial purposes must purchase a license from Freedom Software.

For a demonstration diskette, or program diskette, write to Freedom Software Co., 13263 Kismet Ave., Sylmar, CA 91342: (213) 362-4200.

#1001 Demo disk: \$5.00 post-paid.

#1002 Amortabl.bas: \$19.00

#### FIXED PAYMENT AMORTIZED LOAN

LOAN DATE: 11,3,81  
 LENDER: BANK  
 BORROWER: DOE  
 LOAN AMOUNT IS \$6000.00 Interest (per Annum): 10.000%  
 AMOUNT FINANCED: \$6000.00 TERM of the LOAN is 22 MONTHS.  
 NET CASH TO BORROWER: \$6000.00 Annual Percentage Rate: 10.000%  
 LOAN is AMORTIZED over 22 months.  
 Total monthly payments (FV) = \$ 6590.92

PAYMENT NUMBER	DATE	PAYMENT (monthly)	PRINCIPAL (portion)	INTEREST (portion)	INTEREST (accum.)	BALANCE (owed)
1	DEC 3 1981	300.00	250.00	50.00	50.00	5750.00
1981 Subtotals:		300.00	250.00	50.00		
2	JAN 3 1982	300.00	252.08	47.92	97.92	5497.92
3	FEB 3 1982	300.00	254.18	45.82	143.73	5243.73
4	MAR 3 1982	300.00	256.30	43.70	187.43	4987.43
5	MAR 3 1982	300.00	258.44	41.56	228.99	4728.99
6	MAY 3 1982	300.00	260.59	39.41	268.40	4468.40
7	JUN 3 1982	300.00	262.76	37.24	305.64	4205.64
8	JUL 3 1982	300.00	264.95	35.05	340.68	3940.68
9	AUG 3 1982	300.00	267.16	32.84	373.52	3673.52
10	SEP 3 1982	300.00	269.39	30.61	404.14	3404.14
11	OCT 3 1982	300.00	271.63	28.37	432.50	3132.50
12	NOV 3 1982	300.00	273.90	26.10	458.61	2858.61
13	DEC 3 1982	300.00	276.18	23.82	482.43	2582.43
1982 Subtotals:		3600.00	3167.57	432.43		
14	JAN 3 1983	300.00	278.48	21.52	503.95	2303.95
15	FEB 3 1983	300.00	280.80	19.20	523.15	2023.15
16	MAR 3 1983	300.00	283.14	16.86	540.01	1740.01
17	MAR 3 1983	300.00	285.50	14.50	554.51	1454.51
18	MAY 3 1983	300.00	287.88	12.12	566.63	1166.63
19	JUN 3 1983	300.00	290.28	9.72	576.35	876.35
20	JUL 3 1983	300.00	292.70	7.30	583.65	583.65
21	AUG 3 1983	300.00	295.14	4.86	588.52	288.52
22	SEP 3 1983	290.92	288.52	2.40	590.92	0.00
1983 Subtotals:		2690.92	2582.43	108.49		
Column subtotals:		\$6590.92	\$6000.00	\$590.92	\$590.92	\$0.00
FINANCE CHARGES:				\$590.92		

Figure 2





TIRED OF THAT CLUTTERED DESK WITH NO ROOM TO WORK?  
**NOW. . .YOUR OWN SPACE COMMAND CENTER!**  
 (You command your work space.)



Introducing. . .  
 The

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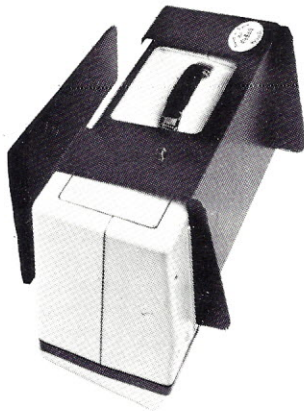
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It's portable! You carry your Osborne by the handle with the OsRack attached.



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\*COMPATIBLE WITH THE OSBORNE 1 AND THE NEW EXECUTIVE MODELS.  
 \*TOUGH ANTI-SKID RUBBER PAD ON MONITOR TRAY.

\*LIGHT-WEIGHT, STRONG 1/8" ALUMINUM CONSTRUCTION.  
 \*ANTI-SKID KEYBOARD PADS INCLUDED.  
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NAME \_\_\_\_\_  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_  
 STATE/ZIP \_\_\_\_\_  
 VISA/MC ACCOUNT# \_\_\_\_\_

SIGNATURE \_\_\_\_\_ EXP. DATE \_\_\_\_\_

☐ CHECK ENCLOSED  
☐ MONEY ORDER  
☐ VISA  
☐ MASTER CARD  
 ©NEWSON-AYERS IND.

1983



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- Income Statements for up to 99 Depts.
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- Automatic periodic billing option
- Automatic end-of-month file backup
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  - Inquiry function uses partial item keys.
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  - Complete audit trail.
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FEATURE	VENDOR: TRADE NAME:	Rocky Mountain Software Systems Desktop Accountant	Peachtree Series 4	TCS Big Four	Data Base Research Corp. The Champion	Systems Plus Accounting Plus
Price		\$395 IBM-PC format 495	\$595 to \$1,800 Depends on Dealer	\$200 to \$1,200 Depends on Dealer	\$1980	\$1980 to \$2800 Depends on Dealer
Includes Payroll		YES	NO	YES	YES	YES
Fully-Integrated		YES	YES	YES	YES	YES
Ready-to-Run		YES	YES	YES	YES	YES
Audio Cassette Tape Start-up & Training Aid		YES	NO	NO	NO	NO
System "Road Map" Guide		YES	NO	NO	NO	NO
Free Users' Newsletter		YES	NO	NO	NO	NO
Source Code Included At No Extra Charge		YES	NO	YES	NO	NO
Telephone "Hot Line" Support Service		YES	YES	Depends upon local dealer	YES	Depends upon local dealer
Sample Data Files for Practice & Training		YES	YES	YES	NO	YES



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for OSBORNE COMPUTERS

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—Luke Crawford  
(agricultural supply company)  
Kennett, Missouri

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(manufacturing company)  
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3. Chart of Accounts with prior year comparisons
4. Daily Transactions Report
5. Itemized Monthly Transactions
6. Balance Sheet
7. Balance Sheet with prior year comparison
8. Income Statement
9. Income Statement with prior year comparison
10. Departmental Income Statement(s)
11. Departmental Income Statement(s) with prior year comparison
12. Detail report for individual accounts
13. Trial Balance Statement

#### Accounts Receivable

1. Daily Transactions Report
2. Invoices (with or without pre-printed forms)
3. Statements (with or without pre-printed forms)
4. Summary Aging Report
5. Detailed Aging Report
6. Itemized Monthly Transactions
7. Detailed Cust. Activity Report
8. Summary Cust. Account Report

#### Accounts Payable

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2. Daily Credit Report
3. Checks with Detailed stubs
4. Check Register
5. General Ledger Transfer Report
6. Cash Requirements Report
7. Transaction Register
8. Open Voucher Report
9. Aged Payables Report
10. Detailed Vendor Activity Report
11. Summary Vendor Account Report

#### Payroll

1. Federal Tax Tables
2. State Tax Tables
3. Payroll checks with stubs
4. Payroll Check Register
5. Monthly Payroll Summary
6. Quarterly Payroll Summary
7. Gen'l. Ledger Transfer Report
8. Detailed Employee File Listing
9. 941 Worksheet
10. W-2 Forms Printing

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Accounts	100	200	400	400	400
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<b>Accounts Receivable</b>					
Customers	200	400	400	400	400
Transactions	400	800	6,000	12,000	18,000
<b>Accounts Payable</b>					
Vendors	200	400	400	400	400
Transactions	400	800	6,000	12,000	18,000
<b>Payroll</b>					
Employees	200	400	400	400	400

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### GENERAL LEDGER

#### STAR MASTER MENU

- 1 - Enter/Modify Chart of Accounts
- 2 - Enter/Sort/Post Transactions
- 3 - Print Reports
- 4 - End of Period Processing
- 5 - Daily Back-up
- 6 - System Initialization

#### FEATURES

- Easy to use menu-driven programs
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#### REPORTS

- Charts of Accounts
- Account Information Listings
- Balance Sheet
- Statement of Income:
  - Month-to-date
  - Quarter-to-date
  - Year-to-date
- Departmentalized Income Statement
- Daily Transaction Register
- Transaction Register:
  - by Date
  - by Account Number
  - by Journal
- Trial Balance
- Prints Disbursement Checks
- Cash Receipts Journal Listing
- Cash Disbursement Journal Listing
- General Journal Listing

### ACCOUNTS RECEIVABLE WITH ORDER ENTER

#### STAR MASTER MENU

- 1 Enter/Edit Customer Account
- 2 Enter Orders/Invoices
- 3 Enter Payments/Credits
- 4 Print Forms
- 5 Produce Reports
- 6 End of Period Processing
- 7 System Initialization

#### FEATURES

- Easy to use menu-driven programs
- Straight forward user documentation
- Formatted screen displays
- Extensive error checking
- Audit trails
- Order Entry via Item File
- Ages receivables
- Produces Invoices and Statements
- Supports Wholesale and Retail Prices
- Volume discounting
- Compiled in CB-80 for enhanced speed and accuracy
- Provides for detailed transfers for items invoiced to various General Ledger Departments
- Tracks Month-to Date and Year to Date quantities and dollars sold for each item invoiced

#### REPORTS

- Customer Listing:
  - by Account Number in Alphabetical Order
- Item File Listing w/Descriptions, supports up to 5 prices
- Month-to-Date Sales by Item
- Accounting Aging:
  - by Account Number in Alphabetical Order
- Invoices
- Credit Memos
- Statements
- Customer Activity Report
- Detailed Invoice Registers printed in Invoice Number or Customer Acct Order
- Detailed Payment Register for all Payments received in Customer Acct. Order

### ACCOUNTS PAYABLE WITH PURCHASE ORDER

#### STAR MASTER MENU

- 1 Enter/Edit Vendor Account
- 2 Enter Purchase Order/Invoices
- 3 Enter Payments/Debits
- 4 Print Forms
- 5 Produce Reports
- 6 End of Period Processing
- 7 System Initiation

#### FEATURES

- Easy to use menu-driven programs
- Straight forward user documentation
- Formatted screen displays
- Extensive error checking
- Audit trails
- Purchase Order Entry via Item File
- Ages payables
- Produce Purchase Orders
- Supports Wholesale and Retail Prices
- Volume discounting
- Compiled in CB-80 for enhanced speed and accuracy
- Provides for detailed transfers for invoices received to various General Ledger Accounts
- Tracks Month-to-Date and Year-to-Date quantities and dollars purchased for each time

#### REPORTS

- Vendor Listing:
  - by Account Number in Alphabetical Order
- Item File Listing w/Descriptions, supports up to 5 prices
- Month-to-Date Purchase by Item
- Account Aging:
  - by Account Number in Alphabetical Order
- Purchase Orders
- Debit Memos
- Vendor Activities Worksheets
- Detailed Purchase Order to Registers printed in P.O. Number or Customer Acct. Order
- Detailed Debit Memo Registers printed in Debit Memo or Customer Acct. Order
- Detailed Payment Register for all Payments made in Customer Acct. Order

### PAYROLL

#### STAR MASTER MENU

- 1 Enter/Edit Employees
- 2 Enter/Edit Time Cards
- 3 Calculate Payroll
- 4 Print Checks
- 5 Produce Reports
- 6 End of Period Processing
- 7 Payroll Tax Table Maintenance
- 8 System Initialization

#### FEATURES

- Easy to use menu-driven programs
- Straight forward user documentation
- Formatted screen displays
- Extensive error checking
- Audit trails
- Federal, State and Local Calculations
- Handles 99 States and 99 Localities
- Produces Tax Deposit History
- Support both Gross and Net Deductions
- Supports Weekly, Bi-weekly, Semi-monthly and Monthly pay periods
- Compiled in CB-80 for enhanced speed and accuracy
- Provides for after-the-fact Payroll
- Accommodates calculation of state taxes as a percent of federal taxes
- Multiple employee exemption categories
- Allows for Withholding and FICA deductions prior to state tax calculations

#### REPORTS

- Employee Listing:
  - by Employee Number in Alphabetical Order
- Payroll Register:
  - by Company
  - by Department
  - by Employee
- Prints Payroll Checks
- Generates W2 and 941 Information
- Federal and State Tax Deposits
- Federal, State and Local Tax Tables
- New Employee Quarterly Taxable Earning Report
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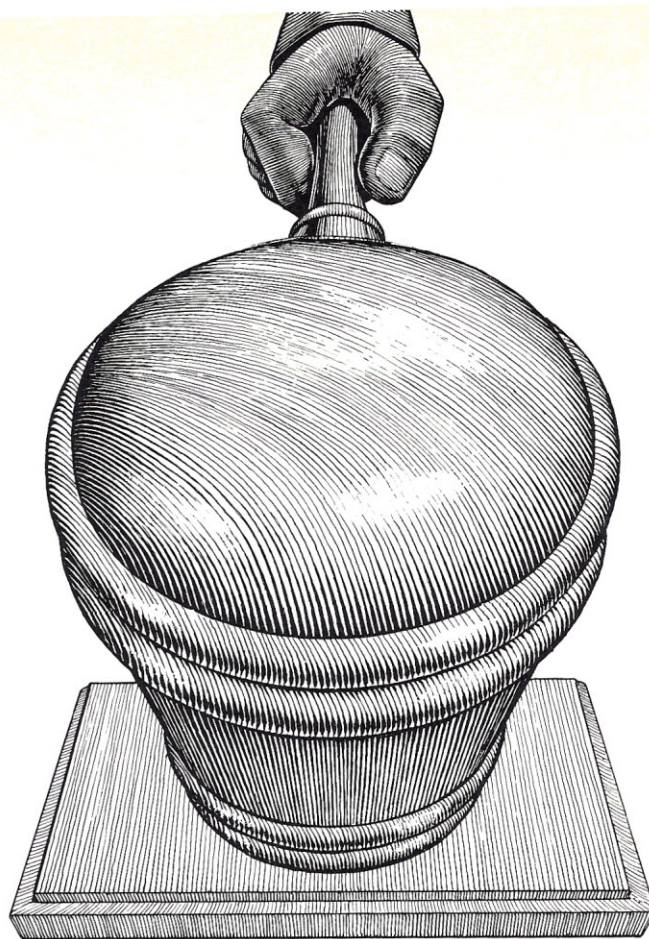
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## ON THE AUCTION BLOCK

*Going, going, gone are the  
days when auctioneers and  
their staffs spent hours  
behind the scenes shuffling  
papers*

**Schuyler Ingle**

The slow but steady onslaught of technology started some rumbling in the auction world a few years ago, and Ken and Pat McCormack were among those making noises.

Ken is the auctioneer and Pat runs the office at the San Diego based McCormack Auction Company, Inc. For three years they watched the evolution of a computer system for auctioneers marketed by a Florida outfit. The first year, the system cost \$21,000. Next year, the hardware had changed and it cost \$10,000. Year three the hardware had changed again, the price remained static, and noises were beginning to come from the users. They got no back-up from the company when things went wrong.

Not to mention that the software didn't quite fit the bill: the program had originally been intended for real estate, then reordered for the auction business.

The McCormacks kept looking for a feasible system. Ken returned from one regional convention grumbling about having to do it all himself to get it done right.

He must have grumbled in the right place because his son's soccer coach overheard him. "I just about fell down when Janet told me she was a programmer," Ken McCormack says of Janet Mika of Information Systems

Consultants. "I'd known her only as a soccer coach for two years." Three years now an independent programmer and computer consultant, Mika had worked ten years in the industry designing environmental data bases, land use data bases, even core simulators for nuclear reactors. She graduated from the University of California at San Diego in computer technology.

The McCormack's problems didn't at first look as gargantuan to Mika as they did to the McCormack's. "There was a computer show in town," she says. "I suggested we go look at some different systems."

They settled on the Osborne 1, fairly new to the world at that time. Portability, of course, was a factor. But so too were the software packages and CP/M. Computer in hand, programmer in tow, the McCormacks returned to the world of auctions and set to work. "This business is three thousand years old," McCormack says, "and the system is unchanged."

Auctions are made up of sellers, or consignors, the auctioneer, the items or lots being sold, and the buyers. The paper trail begins when the buyer registers and leaves a deposit, and ends with an invoice as the buyer checks out. What goes on in between, as Mika discov-



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**"... it is a program specific to the peculiar needs of the auctioneer, written by an auctioneer. Not some real estate program dressed up to look different."**

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ered, is a constant flow of tiny bits of information.

### **Along the paper trail**

All auctions are pretty much the same and start well before any buyers appear. The lots, whether nuts or bolts or diesel trucks, are organized in an orderly manner so the selling can build momentum. The lots are numbered, tagged, and entered on a clerking sheet, a two or three page form. There is room for a couple dozen lots on a page, all the information and the lot numbers written on individual squares. The auctioneer fills in the clerking sheet as he sells, and the sheets are run back to the office as the sale proceeds. The office staff tears off the top sheet and breaks it down into the separate lot squares: all the little bits of paper. A carbon master remains intact. The little bits of paper are then filed with the appropriate buyer numbers. Calculators hum and clack as running totals, both for the individual buyers and the auction as a whole, are maintained.

The system crescendoes at check-out. By then the auctioneer is tired and the office staff frantic. And the buyers want to pay their bills, pack their merchandise and go home—all of them wanting to be first. It is common for an auctioneer to handle a hundred buyers and a thousand or more lots. It has always been a labor-intensive and paper-intensive way to sell merchandise.

"I spent time behind the scene at auctions to see what they did," Mika says. "I worked with the clerks and could see where the bottlenecks were. It's a harried atmosphere. The auctioneer is going as fast as he can. Mistakes are there to be made with that many people working in a hand-done system with little bits of paper. Check-out was the most harried, the big bottleneck." It took three months to figure out the paper flow, another three months to write the program. "The first time we used the system the sale was small, \$36,000," Mika says, "and we were off only a dollar. Data checking, setting up rigorous procedures to enter valid, correct data, was a biggie when I wrote the program. The six clerks tallied their receipts and I pressed the return key on the Osborne. The dollar was their mistake, not something wrong with the program."

### **The new bottleneck**

The computer-monitored auction begins with registration. As the buyers register, pay a deposit, and receive their number, they also indicate whether or not they have an appropriate resale number. All that information goes right into the computer memory. As the sale progresses, the clerk sheets come back to the office, and the lot number, buyer number, and price paid are entered into the computer. The computer memory already contains a description of all the lots. The little bits of paper from the clerk sheet are then filed with each buyer number. A sale total can be figured at any time. And any mistakes are painlessly corrected. At check-out six clerks are no longer doing paperwork at a fevered pitch. They are taking in money as fast as they can. "The Osborne actually works faster than we can



take in the money," McCormack says. He sounds pleased with the new bottleneck.

The computer prints an invoice for each buyer figuring taxable and non-taxable items, resale number information, initial deposit made. Each purchased lot and its description is listed on the invoice. The buyer is handed his little pieces of paper torn from the clerk sheet, and rounds up his merchandise. At the door a security guard takes one of those little bits of paper for each lot, like airline baggage tags. What used to take 15 or 20 minutes per buyer takes that long for the entire check-out/invoice process.

The O-1 and the auction software then kick into high gear. A complete sales summary is immediately available, something that used to take days to work up. The summary can be ordered in either numeric order, one lot to the next, or in sequential order, as most auctions tend to skip around. A tax summary is written. A consignor's summary lists all the taxable and non-taxable sales and figures the auctioneer's commission for each lot sold. The final settlement sheet gives the net figure of the sale, including all the commissions, the expenses accrued versus the expenses allowed.

### **Computerized clerking**

The McCormack Auction Company specializes in industrial and commercial sales, as well as bankruptcy sales and liquidations. "With the current state of the economy," McCormack says, "my busi-

ness is just great. But I'm getting more and more calls asking, 'Do you have computerized clerking?' I have actually handed in the same bid on a bankruptcy as another auctioneer and been awarded the sale because of the computer."

Getting involved with the courts or with county governments can get complicated. "I recently did a sale for the county and there was property from several different county agencies, several different local municipalities and a community college. We flagged each lot with the different consignors when we entered the lots into the computer. At the end of the sale the consignors could line up and get individual summaries of the sale showing what their property sold for, whether or not it was taxable, and what my commission was."

McCormack is just now discovering the inventory potential of his program. He has finally opened a warehouse for in-house, rather than on-site, sales. What could develop into a rat's nest of confusion, keeping track of who has consigned what for sale, remains perfectly clear and ordered in the computer system. Mika also included a mail list database in the program and McCormack is able to sort his list three different ways: commercial buyers, industrial buyers, and those who will buy anything. Targeted mailings go out before any sale, no matter where it might be.

### **It's on a Honda**

The portability of the Osborne, a factor that looked attractive to the McCormacks at the computer show, proved to be one of its greatest assets. On-site auctions are rarely comfortable, always dirty, quite often in isolated areas, and the auctioneer can never count on electricity. "In industrial auctions," McCormack says, "we operate out of a Ford van and we run the Osborne off a Honda generator. At small auctions we don't bother with an external monitor, but for longer ones we bring it along. We also travel with a printer." That travel has taken them throughout the Southwest though Carson City, Nevada, is the spot both Pat and Ken McCormack mention when the subject of favorite on-site auctions comes up.

"We had to go there twice," Ken McCormack says. "It was a heavy equipment company and the first time they were reorganizing their debts and we sold 60 percent of their inventory. It was July and 104 degrees that day. We went back in December to finish the sale when the company declared bankruptcy and the morning of the sale it was 6 degrees." It was also a short sale, \$250,000 of merchandise sold in an hour, the Osborne performing in cold weather as well as hot. "You sell a piece of equipment for \$75,000 and it takes you maybe two minutes," McCormack says. "You count your commission on that, you feel great."

The McCormacks and Mika formed a company to sell their software. The company is called Action Software Design, a play on words of the "Action Auction" out-



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**“The auctioneer in 1985 who isn't computerized isn't going to be working.”**

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fits found in every phone book. The software they call Auction Master, and it is selling by word of mouth. Ken McCormack points out that it is a program specific to the peculiar needs of the auctioneer, written by an auctioneer. Not some real estate program dressed up to look different.

#### **A 20-minute sale**

At a regional auctioneer association convention held at Lake Tahoe they set up a table with three Osbornes (the McCormacks own two) and invited auctioneers to sit down and give it a go. They were selling a complete system—Osborne, printer, monitor, box of paper and software—for \$3,295. They normally charge \$4,495 for the system, \$1,595 for Auction Master alone. Their rival, with his \$10,000 system, came over and watched them make a sale in 20 minutes. “Business has been too hectic,” McCormack says, “to pay much attention to Action Software. We don't advertise. But we're going to the national convention in Dallas this year and will have a table set up there. I tell you, with all the calls I get asking if I have computerized clerking I know that the auctioneer in 1985 who isn't computerized isn't going to be working.”

The most recent McCormack Auction Company sale was a San Diego Chevrolet dealer and the merchandise ranged from the cars on the lot to the tools in the garage to the pencils in the office. “When it came to the computer,” McCormack says, “I figured we were in trouble. The thing filled a closet, had six display terminals, a

hundred miles of wire, and a printer the size of Fiat. 32K memory. I was happy to get \$10,000. The Bank of America rep at the sale was crying about that because he had loaned the company over \$100,000 to put that system in. I pointed to my Osborne and told the guy, ‘See that little machine? That's everything in that big computer and more.’ ”

*Auction Master retails for \$1595.00 from Action Software Design, 2430 South Barcelona, Spring Valley, CA 92078.*

*Schuyler Ingle, a contributing editor at California Magazine, recently returned to Seattle, where he is now a columnist for The Weekly. The September issue of Harper's Magazine carried his article about computer-directed war games at the US Army's National Training Center. He's owned his Osborne for one year.*

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#### **Menu of Commands**

Bidder Registration  
Bidder Update  
Bidder Listing  
Catalog Preparation '  
Catalog Printing  
Consignment Registration '  
Consignment Update  
Lot Sold. Enter data on sold lot  
Lot Update. Correct sold lot data  
INvoice  
Summary (Consignment)"  
Summary (Short)  
Summary (Long)  
Summary (Numeric)  
Reboot Procedure  
FiNished (Close up shop)

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# INSTALL. SUB VS. INSTALL. COM

---

*A weighted comparison  
between two handy WordStar  
tools*

---

Doug Hurst

**I**NSTALL.COM allows WordStar to be modified, configured and customized in many different forms. I suspect most everyone using WordStar has had some experience with INSTALL, especially with patching for printer control codes.

As convenient and powerful as INSTALL.COM is, it does have minor drawbacks. Entering a hexadecimal sequence and forgetting to hit the RETURN key twice after each entry is a common mistake. Worse still, in one's exuberance, the patch can overflow into other patch labels by the inputting of more code than is allowed.

Also, what about that terminal/printer type/communications protocol/CP/M list device stuff on the front end of the INSTALL program? It's quite a nuisance, especially since the answer is usually U & Y (no change/confirm) to all the questions.

Lastly, what if the math program contained in WORD-PAC has been installed? WS.COM that has been added to can no longer be IN-

STALL.COM-ed. Oh, the attempt can be made, but disappointment is almost a certainty. Take heart, help's on the way.

To keep things as similar and simple as possible, the INSTALL name is retained. But instead of the filetype .COM, .SUB is used (meaning a SUBMIT file). Those who haven't used CP/M's SUBMIT.COM and XSUB.COM before need not worry (see references at the end of this text). For the most part WordStar will be used. All that's necessary is to use the filetype .SUB instead of the possibly more familiar .DOC, .LTR and .TXT.

SUBMIT.COM allows an entire sequence of CP/M commands to be executed, instead of one at a time as is normally done from the A> or B> prompt. For example, the following commands could be entered and executed one at a time from the A> prompt with the CP/M System diskette in Drive A:

STAT.COM <RETURN>

XDIR.COM <RETURN>

DIR.COM <RETURN>

Or, all these commands could be

entered in a WordStar file called XXXXXXXX.SUB (in the "N" non-document mode). By using SUBMIT.COM, all the commands would be performed by typing: SUBMIT XXXXXXXX.

Using XSUB.COM along with SUBMIT.COM allows actual loading and execution of other programs beyond the CP/M command line, like DDT.COM, the CP/M Dynamic Debugging Tool. And—how convenient—that's the exact program to use here.

First, an example. Using XSUB.COM within a XXXXXXXX.SUB file (XSUB must always be used this way) might look like figure 1. (See next page.)

If SUBMIT XXXXXXXX is typed, XSUB.COM is invoked, DDT.COM loads up and the various addresses are changed. G0 (as in George zero) returns control to CP/M.

The final SAVE command should not be taken lightly. It is important to ensure that enough pages of hex memory are saved to encompass the entire program.



```

;REMARK: XXXXXXXX.SUB for altering STAT.COM
XSUB
DDT STAT.COM
;Change hex address beginning
;at 1234
S1234
AA
BB
CC
DD
.
;Change hex address 4321
S4321
01
02
.
;Return to CP/M
G0
;These patches, of course, are for example
;use only. If they were to be saved, the
;command SAVE 21 STAT.COM would be input
;next.
XDIR
;End of sample test.

```

Figure 1

Normally WordStar occupies addresses 0100h through 4000h when loaded. The way to determine how many hex pages to save is to use the left two numbers of the starting and ending addresses (round up if the right two digits of the upper address contain any values at all). Then convert the hex to decimal. In the case of WordStar, 40 hex (left two digits of ending address) converts to 64 decimal. From this, subtract the 01 hex (left two digits of start address) which converts to 01 decimal. Thus, SAVE 63 WS.COM (for WordStar with MATH installed, normally SAVE 84 WS.COM).

Enough preliminaries—on with procedures.

Included in this article are two SUB files, INSTALLA.SUB and INSTALLB.SUB. Memory constraints don't allow for one large file. Besides, one file would take quite a while to execute; since not that many addresses get changed, it's better to keep them a little shorter. The addresses altered by each of the files have been grouped in a sort of prioritized way from those most often changed (in the author's experience) such as printer control sequences, downward to those

least often changed such as margins and character widths.

Each of these files, or any of them, should be formed using WordStar's "N" non-document mode. This cannot be overemphasized. Using the more normal "D" mode will leave invisible control characters which will be seen, and balked at, by SUBMIT.COM. Enter the files very carefully. If for example, 35h will be inserted in some address, 35<CR> should be entered. An additional space between the 5 and the <CR> will fool XSUB.COM into thinking that three hex numbers are trying to be placed into an address big enough for only two.

The hex numbers inserted by each of the files are merely the default values for WordStar (Version 2.26) as supplied with the Osborne 1. In other words, if the .SUB files were run as is, no changes at all would be made; so they are perfectly safe ... for now. (It is strongly suggested that each is SUBMIT immediately after entered for test purposes. Also print a copy of each file.) The SAVE command at the end of each program saves the normal WordStar.

Make a diskette containing the

following files:

INSTALLA.SUB (commonly modified screen/format labels in WordStar)  
 INSTALLB.SUB (commonly modified print control labels in WordStar)

SUBMIT.COM

XSUB.COM

DDT.COM

Note: This diskette should have CP/M System tracks on it.

Alter to individual taste any or all of the INSTALL(X).SUB files using WordStar. Now insert this diskette in Drive A and any working WordStar diskette in Drive B. Type in the following:

SUBMIT INSTALLA <CR>

Order is not important. INSTALLB could just as easily come first.

Do this for any or all of the .SUB files. If the correct sequences were entered in all cases, the new WordStar should boot up and perform flawlessly. If it doesn't, codes and sequences should be rechecked and run again.

To conclude the explanation of the program procedures it should be pointed out that just as hex values and the number of hex pages SAVED in each file can be changed, the addition of other addresses of preference is equally possible, as is the creation of whole new files. This might take the form of INSTALLC.SUB, using A and D as a guide.

Those glancing at the programs have probably yelped, "Geez, this looks like a lot of work!". Well, initially, it is. So, why is it going to be worth it to form all these files? Why will they be superior to INSTALL.COM?

First, INSTALL(X).SUB eliminates most all of INSTALL.COM's shortcomings. Second, by printing the files after entering preferences, a permanent, hard copy of both the default values and your installation are at hand, which can be compared against one another. It also provides a worksheet for any future alterations.



## STARTING INSTALLA.SUB

```
; EXAMPLES OF SCREEN/FORMAT INTERNAL LABELS
; FOR WORDSTAR 2.26.
;
XSUB
DDT B:WS.COM
;Initial HELP level (00-03)
S0360
03
.
;Displays "for Maximum HELP message"
;(ON = FF, OFF = 00)
S0361
FF
.
;Insert Mode (ON = FF, OFF = 00)
S0362
FF
.
;Directory Display (ON = FF, OFF = 00)
S0363
FF
.
;Left Margin minus 1
S037F
00
.
;Right Margin minus 1
S0380
40
.
;Wordwrap (ON = FF, OFF = 00)
S0385
FF
.
;Justification (ON = FF, OFF = 00)
S0386
FF
.
;Variable Tabs (ON = FF, OFF = 00)
S0387
FF
.
;Soft Hyphen entry (ON = FF, OFF = 00)
S0388
00
.
;Stop to Hyphenate ^OH (ON = FF, OFF = 00)
S0389
FF
.
;Line Spacing (1-5)
S038E
01
.
;Pause between pages during print
;(ON = FF, OFF = 00)
S03CD
00
.
;Omit Page numbers during print
;(ON = FF, OFF = 00)
S03D3
00
.
G0
;SAVES NEWLY INSTALLED WORDSTAR
SAVE 63 B:WS.COM
;END RUN. For additional examples of WordStar
; internal labels, see page 86 of the Dec'82/
; Jan'83 Portable Companion.
```

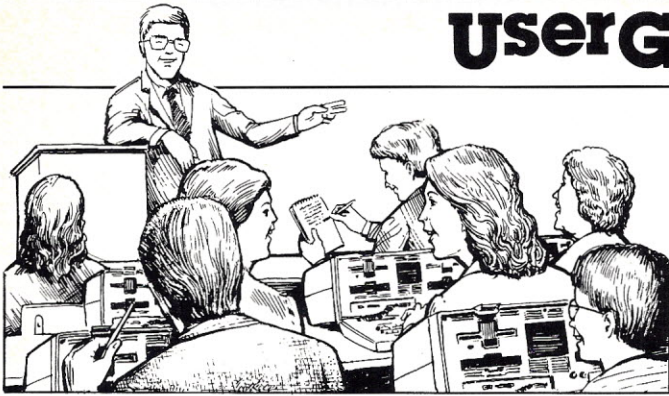
*Editor's note: Refer to Part Three of "I/O, I/O, It's Off to Work We Go" in the April/May issue for patching procedures and specific printer examples. Also, see the "Modifying WordStar" section in your Osborne User's Guide.*

## STARTING INSTALLB.SUB

```
; COMMONLY MODIFIED PRINT CONTROL LABELS
; FOR WORDSTAR 2.26
XSUB
DDT B:WS.COM
;
;Alternate Character Seq (PALT: control PA).
S06B5
00
00
00
00
00
00
.
;Standard Character Seq (PSTD: control PN)
;Up to five bytes total. Insert after
;S06BA, one byte at a time as above.
S06BA
.
;User Defined 1 Seq (control PQ)
;Up to five bytes.
S06C9
.
;User Defined 2 Seq (control PW)
;Up to five bytes.
S06CE
.
;User Defined 3 Seq (control PE)
;Up to five bytes.
S06D3
.
;User Defined 4 Seq (control PR)
;Up to five bytes.
S06D8
.
;Superscript Seq (control PT)
;Up to five bytes.
S06BF
.
;Subscript Seq (control PV)
;Up to five bytes.
S06C4
.
;Printer Initialization Seq
;Up to seventeen bytes.
S06E7
01
0D
00
;plus fourteen more bytes, if needed.
.
;Printer finish sequence.
;Up to seventeen bytes.
S06F8
.
;Carriage return/Line feed
;sequence (PSCRLF:)
;Insert up to eleven bytes.
S0696
02
0D
0A
;Plus eight more, if needed.
.
;Overprint sequence (PSCR:)
S06A1
02
0D
;Plus five more, if needed.
.
;Ribbon change (control PY)
;Up to five bytes.
S06DD
.
;Ribbon change back (control PY)
;Up to five bytes.
S06E2
.
G0
;SAVES NEWLY INSTALLED WORDSTAR
SAVE 63 B:WS.COM
;END RUN.
```



# UserGroups



## Adding a software printer spooler

John Dilday

*Editor's note: this tip is written for the advanced and experienced Osborne user.*

My copy of WordStar 2.26 now contains a software printer spooler capability. This feature allows smooth and simultaneous editing and printing of WordStar files. Activating it requires that the "printer busy" connection be active and a subroutine added. Printer busy is part of a standard Centronics type printer connection.

Before activating this feature, do some simultaneous printing and editing by calling KP during an edit. Note that editing stops completely when the printer demands control from the processor.

Use INSTALL to complete modifications on a copy of your WordStar:

location	old value	new value	description
0718	00	FF	-HAWSBY busy routine flag
071A	00	C3	JMP -unconditional jump
071B	B7	E0	to unused space in WS
071C	C9	02	user patch areas at 02E0
02E0	00	CD	CALL -call subroutine at
02E1	00	2D	E52D for single density
02E2	00	E5	
02E3	00	A7	ANA -test for busy = FF
02E4	00	C0	RNZ -cond ret if not 00
02E5	00	3F	CMC -comp carry flag to = 0
02E6	00	C9	RET -ret from subroutine

For double density computers, the call address should be at E103. This address is at 2D lower address byte and the upper address byte is found at location 0002 of your system memory. You may look at 0002 with INSTALL; this value must not be changed. The new byte at location 02E2 should be the same as the byte at location 0002 of system memory.

This routine assumes the printer status routine at location 2D leaves the accumulator = 0 if the printer is not busy. In some versions of CP/M this printer status flag is reversed; the byte at location 02E4 may have to be changed from C0 to CB.

Locations 071A and 071C should be the entry address in the WordStar user patch area located at 02E0 to 035C of your system. Check this area to locate the beginning address of seven consecutive unused bytes. This is the address to use 071B lower address byte and 071C upper address byte. The bytes at 071C and 071B will now be 02E0 if this is your first patch to the user patch area.

The subroutine was composed by Ted Warn. Inspiration and encouragement came from Erwin Winz. Both are members of R.O.C.C.

*Reprinted from the June issue of R.O.C.C. PILE, the newsletter of the Raleigh Osborne Computer Club of North Carolina.*

□

## Doubling hard disk memory

Bob Gras

If you had a single-density Osborne computer, but now have a double-density and are using the Corvus hard disk drives, this one is for you.

In the CLINK2K2.ASM file (that is used to produce your CLINK2 program to link you to the Corvus drive), there is a place where the CLINK2 program needs to know a memory offset from CP/M. With the new double density system, more memory is required for managing the Osborne floppy drives, so this value has to be reset to accommodate the double density version of the Osborne. Look for a section in CLINK2K2.ASM that looks like this:

```
IF ABOVE ;
; BEGINNING ADDRESS OF CLINK2 *
FREE EQU (MSIZE*1024)-CLK2SZ
ENDIF
IF NOT (ABOVE) ;
DELTA EQU 500H ; OFFSET FROM STANDARD CP/M *
```

When you find this (it is in the first couple of pages), just type a 900H in place of the 500H. Save the finished new version, then assemble and link the new version. This program will now work with the double density machines.

Not familiar with assembling and linking? So who is? You'll need your CP/M system or utility disk with a copy of ASM.COM and with a copy of LOAD.COM. Then get your Osborne manual and follow the instructions for assembly and linking given on pages 253 through 255 in the version dated "Rev: 2/28/82." If you have a different manual, you may have to dig around a bit.

*Reprinted from the OSUG newsletter, Anchorage, Alaska.*

□







# UserGroups

## Mailing labels with SuperCalc

Nancy Gutbrodt

Here's a "super non-calc" aid using SuperCalc for mailing labels.

Articles appearing in previous editions of the *Portable Companion* dealt with mailing label preparation using dBASE II and WordStar. Unfortunately I don't own dBASE II, and the WordStar application, while very workable, did not answer my specific need.

I am president of a citizens advocacy group, and copies of our monthly newsletter are routinely sent to all New York state legislators and the New York delegation to Congress in Washington DC. After the November elections, our mailing list had to be revised. It was typed previously on a manual typewriter using Xerox label masters, so it was time to put it on the Osborne.

There are 61 state senators, 150 state Assembly members, and 36 members of Congress from New York state. Within the New York legislature, addresses are virtually all the same: "Hon. \_\_\_\_\_,

Legislative Office Building, Albany, New York 12247 (or) 12248," depending on whether he or she is a Senator or Assembly member. The same situation is true for members of Congress; only a zip code digit differentiates House and Senate.

To use WordStar for the labels would either require me to type "Legislative Office Building, Albany, New York 12247" 211 times, or fool with blocks in the non-document file for use with MailMerge. I was looking for an easy way out, and discovered it in SuperCalc.

Here's how to do it:

Set up a SuperCalc worksheet to fit your labels. (I used Xerox '33-Up Labels.' Each 8½ x 11-inch sheet contains 33 1 x 2⅓-inch labels.) Using only columns A to C, set the column width to 34. (After a little experimentation and measuring, I allowed three rows between each three-line address.)

For example, the first three labels (columns A to C) start in cell A1 and end in cell C3. The next three labels start in cell A7 and end in cell C9. The next three labels start in cell A13, etc. For a daisy wheel printer, set the pitch to 12 characters per inch. If you have addresses of more

than three lines, adjust the spacing accordingly, keeping in mind that there are six lines of type to the inch.

Start labels in Row 1 by typing three names (Columns A-C). Remember, text in SuperCalc must always start with quotation marks (""). In cell A2, type the second line of the address. In cell B2, type the replicate command, /R. In response to the prompts, type A2 as the "from" cell. (Return). Next prompt asks where to put replicates of A2. In this case, type B2:C2 and then (return). Move to cell 3, type in the third line of the address and follow the same replicate procedure as just described.

The second set of three labels (Row 7 in my example) is even easier. Enter three names in A7-C7. Use the replicate command in A8. The "from" cell this time is A2. "To" cells are A8:C8. Follow the same procedure for A9, replicating A3 to A9:C9.

An even faster alternative is this: Don't use the names at first, and enter the two-line address in cells A2 and A3. Replicate into cells B2:C2 and B3:C3 as described earlier. Then use the COPY command, /C, to fill in addresses for the remaining 27 labels.

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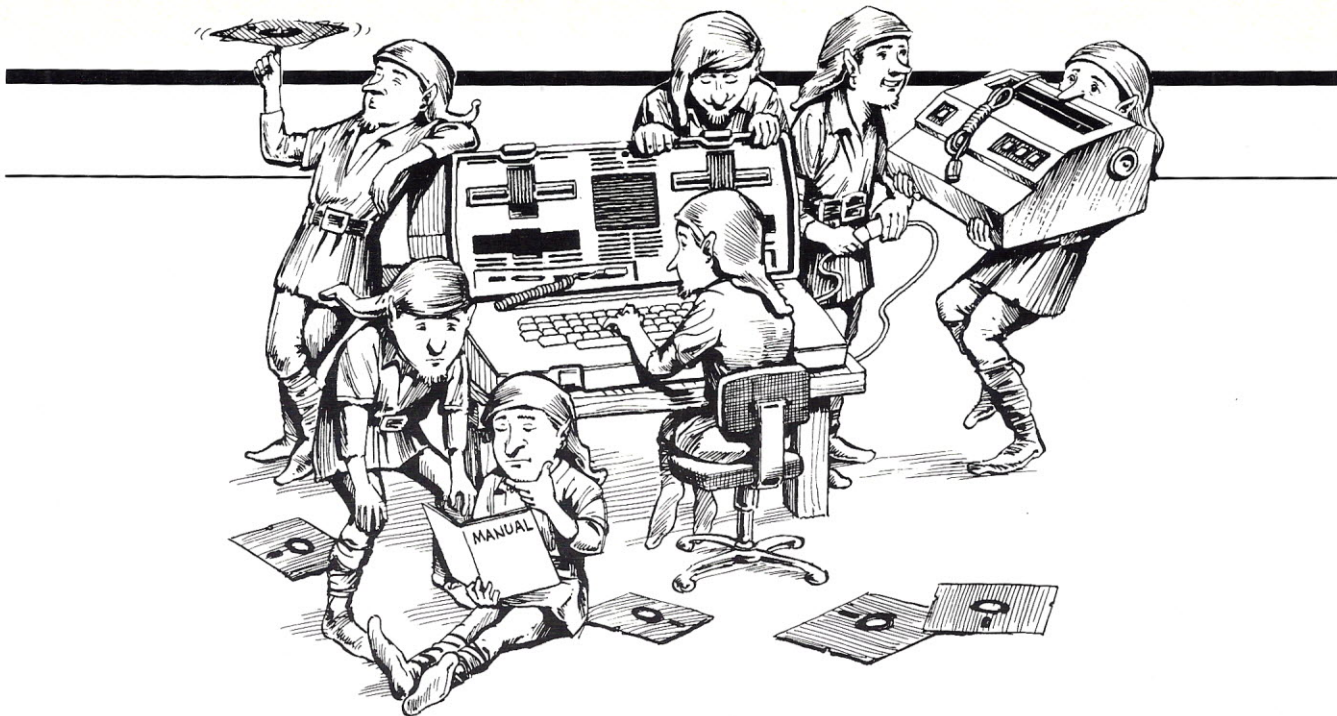
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Here are the commands:

```
/C From: A2:C3 (Return)
/C From: A2:C9 (Return)
/C From: A2:C21 (Return)
/C From: A2:C9 (Return)
```

```
To: A8 (Return)
To: A14 (Return)
To: A26 (Return)
To: A50 (Return)
```

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# UserGroups

Return to A1 (=A1) and fill in the 30 names. Now the first 30 labels are complete. Below is how they will appear on-screen (lines denote label boundaries):

1 Hon. Kenneth LaValle 2 Legislative Office Building 3 Albany, New York 12247 4	5 Hon. James J. Lack 6 Legislative Office Building 7 Albany, New York 12247 8	9 Hon. Caesar Trunzo 10 Legislative Office Building 11 Albany, New York 12247 12
13 Hon. Owen H. Johnson 14 Legislative Office Building 15 Albany, New York 12247 16	17 Hon. Ralph J. Marino 18 Legislative Office Building 19 Albany, New York 12247 20	21 Hon. John R. Dunne 22 Legislative Office Building 23 Albany, New York 12247 24
25 Hon. Michael J. Tully, Jr. 26 Legislative Office Building 27 Albany, New York 12247 28	29 Hon. Norman J. Levy 30 Legislative Office Building 31 Albany, New York 12247 32	33 Hon. Carol Berman 34 Legislative Office Building 35 Albany, New York 12247 36

To print labels, remove the border using the GLOBAL command, /G B. Then use the OUTPUT command, /O. Carefully line up the labels or master in the printer so the first line of the first label will print about 5/16-inch down from the top line of the label. (I left the top three labels blank; my files only hold 30 labels and I used label sheets with 33 per page.)

After completing the first 30 labels, name and save the file. Remember to preface the file name with the drive identifier, B:. Leaving the worksheet on the screen, return to cell A1 (=A1) and type in the second

batch of names. This time it isn't necessary to type any addresses, since they are already in the appropriate cells. After replacing all old names with new, save the new file

and the second set of 30 labels is done.

I purposely saved each set of 30 labels separately, carefully named each file and made a back-up copy as well. For future editing, I have a cross-reference of the boundaries of each file and can edit without searching each file for a name.

While this application is specific to a situation where all the addresses are the same, it can be useful for other label applications as well. It works GREAT for return address labels, and it's even easier than the method described, since you don't

have varying names to contend with! Another use could be for your church mailing list. The list may have varying names and street addresses, but most of the towns, states and zip codes may be the same. These things could be replicated and the file edited for the exceptions.

Try it. I think you'll be pleased with the results.

*Nancy Gutbrodt is president of the New York Voice of Energy and a member of the First Rochester Osborne Group (FROG) in Rochester, NY.*

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# Beginner's Luck

## Beating the BDOS error

Edward F. Leddy

The great bane of computing is the BDOS error. Quite unexpectedly, the computer says it can't edit, call up a document or print it. This usually happens at the worst possible moment: after a document is finished and a hard copy is needed, or when ^KS has been forgotten. All that work has gone to waste. If this happens, fear not, all is not lost.

BDOS errors are caused in a number of ways. Fluctuations in electric current, static electricity, defective disks, mechanical glitches in a drive and even cosmic rays are all, at times, blamed. (I think it's gremlins.) The causes aren't important to the user. What matters is how to prevent them and how to rescue the data when they happen.

### Prevention

There are a number of rules to prevent BDOS error. They can all be disregarded, usually with no ill effect. Most times there will not be an error when the rules aren't followed.

The O-1 is rather forgiving in this regard. However, the attempt is to reduce BDOS even further, and even one is a big problem. Prevention is easier than cure so follow the rules.

**Power lines:** When plugging in the computer, use a power line with nothing else plugged in on it. Especially avoid any type of appliance with a motor which cycles on and off. Refrigerators and air conditioners are especially bad. They send strong surges of power through the circuit when they turn on.

**Static electricity:** Many BDOS errors are caused by static electricity. You can accumulate a static charge just by walking across a rug. This small amount of electricity is capable of scrambling a disk or even damaging a chip. Avoid bringing static electricity to the computer. The easiest way to do this is to discharge it into a ground before touching disks or the O-1. This can be done by touching a large metal object.



If the computer is on a metal desk, this has been done every time a drawer is opened to get a disk or the desk is touched. Sometimes a spark may be felt. Metal connected to a ground of some kind should be touched before the floppies or the computer are touched.

In areas with severe static problems, a static mat may be needed. Advertised in computer magazines, it's a special rubber mat designed to allow the gradual release of static electricity.

**Weather:** Another serious electrical problem exists which is not usually in the home but in the electric company's system. Lightning causes surges of electricity through the system. These surges are usually controlled by the electric company to the extent that they won't permanently damage appliances and TV sets, but they will scramble data and sometimes even cause damage to computers.

If one happens while the TV is on, the screen will shrink or flicker for a moment. This is enough to lose data if using the computer. The computer should be off during a lightning storm and the plug pulled. The hazard can be even more serious than data loss. A friend had his Atari 800 literally fried by a lightning bolt which hit his house in such a storm. The Atari was off, but plugged in. That connection was enough to lead the electricity into it.

Commercial surge protectors which fit into the plug outlets in the wall are available. Some of these will even keep the computer in operation for a time by battery power.

**Disks:** Store disks in a clean dry area so they don't acquire dust or moisture. Don't bend them. Even though they are called floppies, they can be flopped once too often. Also don't write on them with a pen or pencil. A magic marker used lightly on the cover is OK.

Use a well-known brand of floppy disks. Off-brand disks or unbranded bulk packs are sometimes

major brands with a discount but there is no way to be sure.

**Disk drives:** The next preventive step is directed toward line fluctuations and disk "burps." Simply take the disks out of the drives when the O-1 is being turned on or off. This will prevent internal surges of electricity, which are common at this time, from writing errors on the disks.

Never open a drive while it is running. Some of the data may not have been transmitted onto the disk from memory; this untransmitted data will be lost.

Don't turn a printer or other peripheral on or off when a disk drive is running. There can be a surge of electricity which will be entered on the floppy disk as an error.

**Back-up your files** with a second copy. The loss of a file or disk is far less serious. All work doesn't require re-doing. This is especially important when working with long documents over a period of days. The back-up copy changes a catastrophe into a mere annoyance and saves all the work needed to rescue a file.

The usual way to back up a file is to use the Copy utility on the CP/M program disk. Save the file ("KD). Remove the program disk. Load CP/M. When the A> prompt appears type "copy." Select B as source drive. Remove CP/M, insert a blank disk in A drive and hit <CR>. When "copy complete" appears, take out the data files. Then insert any other files which need backing up. Continue in the same way until all files are copied.

A back-up method which is often overlooked is the hard copy. Print a copy on paper. This has several advantages. First, especially in a long document, it makes editing easier. Second, printing errors such as unformatted paragraphs, unpaired underline or boldface commands, and text outside margins show up more clearly on paper. Last and sometimes most important, a copy

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exists which is safe from the BDOS monster.

*Save often:* If copy is saved frequently, damage done by a BDOS error is minimized. With only a small amount of unsaved material, it is easy to sacrifice it and use any easy rescue method. When there is a lot of material heroic measures may be needed. If copy is saved frequently, the error will be apparent sooner and correction can be made before a lot of work is wasted. To make frequent saving easier, set a user programmable key with; ^KS^QP. This will save and return the cursor to the same place in the text.

### Cure

Even with all the preventive measures, the day will still come when BDOS error is on the screen. The first rule is: panic. Be upset, admit it and get it over with but DON'T TOUCH ANYTHING YET. Later, when calm, follow these procedures.

*Booting up:* If the BDOS appeared while loading a program or data file push RESET and boot up again. The program may not have loaded properly. The problem may not be on the disk. If it isn't, the disk will usually load correctly the second time.

Often the BDOS error is not on the file needed. If a number of files are on the same disk, try deleting all backup files and the non-essential files. Removing these files may also remove the BDOS error.

If the file won't load then something is wrong on the disk. The error is often not in the actual file. It might be in the directory or in an unused section of the disk. If so it can usually be removed by transferring the information to another disk using CP/M:

- Load CP/M SYSTEM disk
- hit <ESC>
- enter PIP, wait for (\*)
- remove CP/M disk, insert a blank disk

- insert problem disk in drive A
- type B: = A:\*. \*[V]  
(A single file can be moved by typing B: = A:filename[V])

This will transfer the contents of the problem disk to the new disk. In the process the contents will be checked for errors ([V] does this). All the material which transfers to the new file will be okay. Often this will be all the files on the disk. Reformat the old disk; it can often be used again.

If the entire disk contents won't transfer, at least those unspoiled individual files can be rescued. What won't move will be the problem file.

Most of the problem file can be saved by one of the methods listed below. To rescue this file it must be editable. Usually editing or printing a file containing a BDOS error can be done by entering "D" from the main menu. Then repeatedly use <ESC> to override the BDOS error messages. After a couple of tries, edit or print should be possible. Then the BDOS error can be corrected in the same way as if it had happened during an edit.

*While editing:* If an error appears in editing it is usually first noticed when saving. Several possibilities exist for rescue of the file. The simplest is to find the error in the document and remove it.

*Find and remove:* Scroll through the file. Usually the BDOS error area will look scrambled, with missing text, and error signs. Carefully delete all of the erroneous entries, including spaces, with ^G and retype what is missing. Generally only a few lines are lost.

*Delete the original:* The next easiest method, if the copy is saved regularly and not much material will be lost, is to go back to the main menu without saving (^KQ or RESET) rename the backup file (E) and delete the original (Y). That's why frequent saving as prevention is recommended.

A variation on this is to mark off



the unsaved material (^KB, file ^KK) and write it to a new file with the block move command ^KW. The prompt will ask the name of the file to write to. Make up a different file name. This establishes a new file. Then enter and edit (D) the re-named backup file, bring the cursor to the end and type ^KR. This will create a new file with all of the data including the unsaved section at the end. Delete the old file and the extra working file.

The PIP procedure will also work if the file can be saved. Generally a save and/or exit will lose all the material typed since the last save.

*The hard way:* This is a lot of work but it can be better than retyping. If the error can't be found and there's a lot to lose, then try dividing the document into parts and moving the good sections into a new file.

Use the block move procedure:

- Divide the document into parts. Mark the start (^KB) and end (^KK) of a large block of text. Then type ^KW. The prompt will ask the name of the file to write to. Make up another file name different from the one being worked on. This establishes a new file. Do this with each section. Give the new files names which keep them in order. For example: Help1, Help2, Help3.
- One section will produce a BDOS error prompt when the attempt is made to move it. This is where the BDOS error is located. Try slicing this section into even smaller parts to rescue as much of the good material as possible. Mark the block with ^KB and ^KK and delete the remaining bad block with ^KY then retype what is missing and save. If saving is possible, that's it. Go back to editing again. If it doesn't work then continue removing blocks until the entire document is duplicated except the bad section in new files without BDOS errors.
- Combine all the new files into one by editing the first new file. Place the cursor at the end of the

first new file. Type ^KR. Enter the additional files one by one into the first by the same procedure until the file is complete again.

- Delete all extra files including the original with the BDOS error.

*SuperCalc:* Disks in SuperCalc can be changed while editing. So, at BDOS error, just put in a new disk and save again. There is also another easy way. In SuperCalc enough room is on the program disk for extra files. With a BDOS error on B, simply save the file to drive A. Then transfer it to another disk by putting a new disk in drive B.

### Desperation time

If all these methods fail, then the only hope remaining is a hard copy of the data. The only consolation is that, even though retyping is the solution, at least the creative effort which the first writing required doesn't need to be repeated. Without a hard copy, a prayer to Saint Dismas (patron of lost causes) is the only thing left to do.

*Editor's note:* See "Saving your ASCII!" in the Apr/May Companion for procedures on recovering unsaved WordStar or MBASIC files that are supposedly "lost" due to BDOS or other errors.

*PIP does more than just transfer files. After several weeks of editing different files on a diskette, the individual file text ends up scattered about on non-contiguous sectors and tracks. PIPing, unlike the COPY command, finds all the pieces of the file and places them in sequential order on the diskette. Files are packed and blank areas on the diskette are eliminated. WordStar seems especially prone to BDOS errors when it must jump all over a "messy" diskette finding various sectors associated with a file, especially when asked to perform a lengthy backwards file scan.* □

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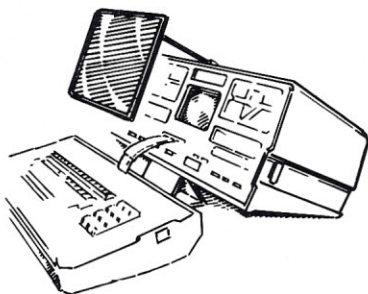
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## CalcAids

## Streamlined spreadsheets

Lee Mowatt

The value of electronic spreadsheets has been established throughout the computer-literate public. They serve nearly everyone. Spreadsheet capability is almost always included in standard software packages for personal computers; it is safe to say that no small business machine is complete without it.

Aside from their obvious ability to calculate, spreadsheets are helpful in a wide spectrum of applications, from the complexities of science to the simplicities of the general ledger.

Because the value of any given cell in a worksheet may be made dependent on the value in any number of other cells, all under formula control, electronic spreadsheets lend themselves very nicely to "what-if" situations: i.e., "What if my mortgage rate went up to 15%?" Worksheet templates can be prepared so that users key in only the necessary numbers and the desired information neatly appears on designated areas of the worksheet.

Applications involving tax preparations, banking activities, business modeling, and financial analysis have all made use of this template technique.

### The "IF" function

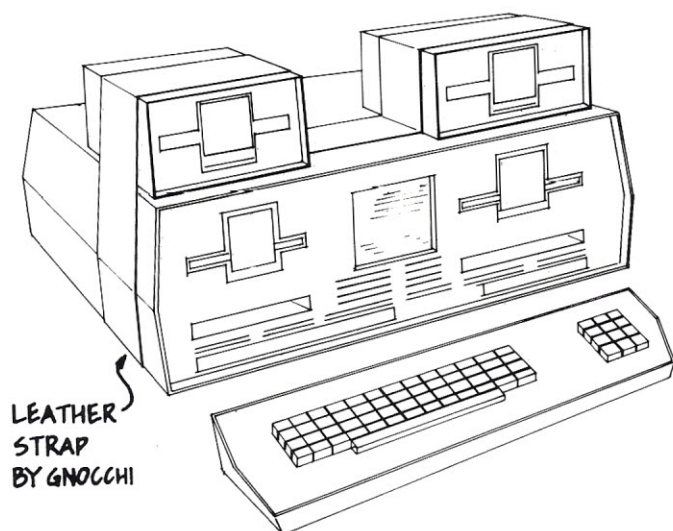
The IF function of SuperCalc worksheets solves the aforementioned "what if" situations. It makes the value of a cell dependent on conditions elsewhere in the worksheet. The syntax of the function is IF(exp1,exp2,exp3), and is interpreted to mean: if expression 1 is true, then use expression 2 for the cell value, otherwise use expression 3. The expressions used in the statements can be any legal expression allowed in SuperCalc, including the relational operators (AND, OR, NOT, etc). For example:

IF(AVERAGE(A4:A36)>0,1,-1)

sets the value of a cell to one if the average of a partial column (A) is greater than zero, otherwise the

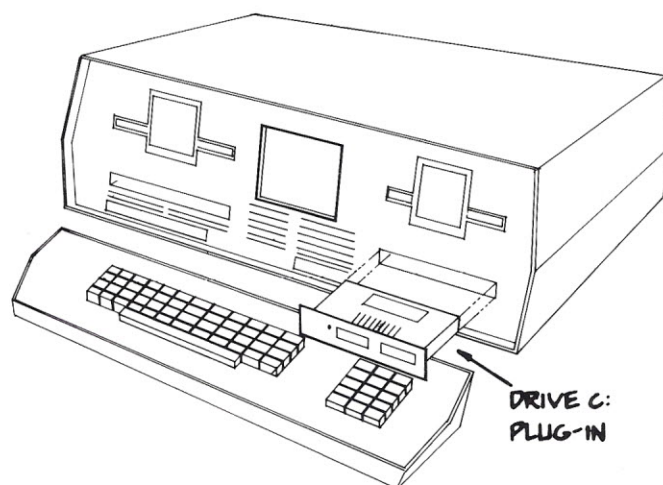


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cell is set to minus one.

A useful application of the IF function is the role it can play in the categorization of listed items.

As an example, consider the cell chart in Figure 1. Assume this chart represents a partial list of expenses along with the account codes from which the expenses are to be debited. The task is to conveniently determine the total amount to be subtracted from each of the accounts.

One way of doing this is to set up a calculation area on the worksheet where each column in this area is assigned an account code. Each cell in a calculation column would contain the IF formula making the

	A	B
1	DEBIT	CODE
2		
3	500.00	3
4	125	5
5	22.01	4
6	38.88	4
7	22.17	2
8	20.00	5
9	104	3
10	424.50	1
11	84.47	2
12	96.88	4
13	840	5
14	TOTAL	

Figure 1

cell equal to the expense only if the account code is relevant for the particular column in question. Figure 2 demonstrates how this would be done. As an example, cells in column E would be made equal to the in-row cells of column A (in Figure 1) only if the account code in column B is equal to 3. Row 14 sums the values of each of the columns to determine account totals.

Figure 3 shows the values that would be assigned to each cell, given the values and formulas of Figure 2.

### The problem

The above technique does have significant limitations. The example

	A	B	C	D	E	F	G
1	DEBIT	CODE	ACCT #1	ACCT #2	ACCT #3	ACCT #4	ACCT #5
2							
3	500.00	3	IF(B3=1,A3,0)	IF(B3=2,A3,0)	IF(B3=3,A3,0)	IF(B3=4,A3,0)	IF(B3=5,A3,0)
4	125	5	IF(B4=1,A4,0)	IF(B4=2,A4,0)	IF(B4=3,A4,0)	IF(B4=4,A4,0)	IF(B4=5,A4,0)
5	22.01	4	IF(B5=1,A5,0)	IF(B5=2,A5,0)	IF(B5=3,A5,0)	IF(B5=4,A5,0)	IF(B5=5,A5,0)
6	38.88	4	IF(B6=1,A6,0)	IF(B6=2,A6,0)	IF(B6=3,A6,0)	IF(B6=4,A6,0)	IF(B6=5,A6,0)
7	22.17	2	IF(B7=1,A7,0)	IF(B7=2,A7,0)	IF(B7=3,A7,0)	IF(B7=4,A7,0)	IF(B7=5,A7,0)
8	20.00	5	IF(B8=1,A8,0)	IF(B8=2,A8,0)	IF(B8=3,A8,0)	IF(B8=4,A8,0)	IF(B8=5,A8,0)
9	104	3	IF(B9=1,A9,0)	IF(B9=2,A9,0)	IF(B9=3,A9,0)	IF(B9=4,A9,0)	IF(B9=5,A9,0)
10	424.50	1	IF(B10=1,A10,0)	IF(B10=2,A10,0)	IF(B10=3,A10,0)	IF(B10=4,A10,0)	IF(B10=5,A10,0)
11	84.47	2	IF(B11=1,A11,0)	IF(B11=2,A11,0)	IF(B11=3,A11,0)	IF(B11=4,A11,0)	IF(B11=5,A11,0)
12	96.88	4	IF(B12=1,A12,0)	IF(B12=2,A12,0)	IF(B12=3,A12,0)	IF(B12=4,A12,0)	IF(B12=5,A12,0)
13	840	5	IF(B13=1,A13,0)	IF(B13=2,A13,0)	IF(B13=3,A13,0)	IF(B13=4,A13,0)	IF(B13=5,A13,0)
14	TOTAL		SUM(C3:C13)	SUM(D3:D13)	SUM(E3:E13)	SUM(F3:F13)	SUM(G3:G13)

Figure 2

	A	B	C	D	E	F	G
1	DEBIT	CODE	ACCT #1	ACCT #2	ACCT #3	ACCT #4	ACCT #5
2							
3	500.00	3	.00	.00	500.00	.00	.00
4	125.00	5	.00	.00	.00	.00	125.00
5	22.01	4	.00	.00	.00	22.01	.00
6	38.88	4	.00	.00	.00	38.88	.00
7	22.17	2	.00	22.17	.00	.00	.00
8	20.00	5	.00	.00	.00	.00	20.00
9	104.00	3	.00	.00	104.00	.00	.00
10	424.50	1	424.50	.00	.00	.00	.00
11	84.47	2	.00	84.47	.00	.00	.00
12	96.88	4	.00	.00	.00	96.88	.00
13	840.00	5	.00	.00	.00	.00	840.00
14	TOTAL		424.50	106.64	604.00	157.77	985.00

Figure 3

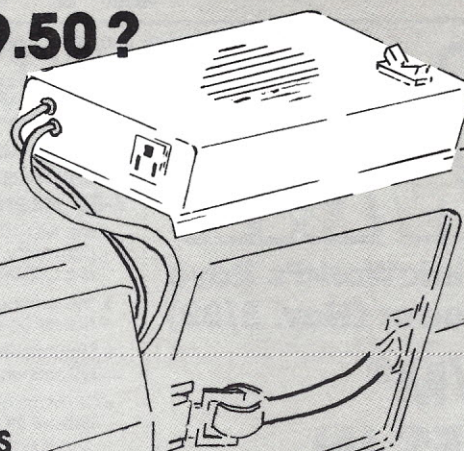






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shown is a small part of a fairly large worksheet. For most practical applications there just isn't enough memory to make use of this categorization trick as illustrated.

Let's deviate a minute, before we get to the real meat of this article, to briefly discuss some basics of SuperCalc's memory-handling capabilities.

### Not quite SuperMemory

SuperCalc allows about 27K of memory to be used per worksheet. (33K on the Executive-ed). This memory is most efficiently used when the worksheet is rectangular. Data in cells outside a rectangular block tie up additional memory devoted to establishing the status (protection, format, etc.) of empty cells. This comes about because, starting at cell A1, the use block is defined by the column at far right, and the deepest row of data entry. For example, if data is entered within the range A1:J10, then an entry is made in cell U20, the block in use will have increased four times, and memory is used to establish the status of all the cells within that range.

Although the worksheet has 16,256 cells (64 X 254), not all of these cells can be used at one time. In fact, if we were to enter a zero into as many cells as we could, we would find that the largest useful blocks would be A1:J254 (2540 cells) or A1:BK41 (2624 cells).

### Report files

One of the nice features about SuperCalc is its arrangement for putting worksheets on the diskettes. All or part of a worksheet can be stored in ASCII form on a disk for later use. This is not the same as saving worksheets on disk, where the information is stored in an unprintable format. Using the /O command and specifying disk for output, an ASCII file is created (or overwritten) which is printable as reports and tables within other text files used by a word-processor

like WordStar.

With that in mind, consider the conceptual task of updating a given worksheet and outputting sections of it in ASCII for use by other programs (WordStar, MBASIC, dBase II, etc.). If the sections to be saved are not adjacent to each other, it becomes necessary to create a new worksheet by either deleting unwanted columns and rows, or by starting with a fresh worksheet and loading the desired parts of the original one (partial loads).

In either case, creating this auxiliary worksheet would have to be done every time we wanted to update and output, and would involve a long string of commands to implement. For the beginner, this string of commands can be more problems than it is worth, and even an experienced SuperCalc user is not immune to human error, tiredness, and frustration. The Osborne 1 and Executive have user defined keys which can be easily programmed to perform a set of commands, but these have their limitations in the number of commands they can execute. They fall short of the mark when large command strings are involved.

### The Execute command

In SuperCalc versions 1.12 and higher, publisher Sorcim has added program execution capabilities via the /X (execute) command. Briefly, when /X is entered, a "command file" name is requested. This command file, which has been created with a text editor or word processor (i.e. WordStar in the non-document mode), and has an .XQT as its suffix, contains a command string whose only size limitation is diskette storage space.

This command file contains SuperCalc commands which can be executed in sequence over and over, quickly and without errors. Commands are entered in the file exactly as they would be entered to manipulate a worksheet (<CR>s

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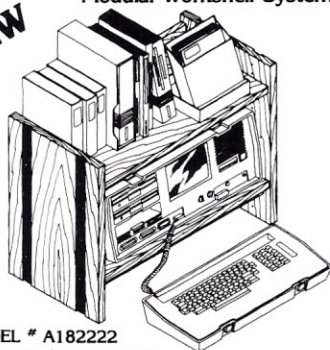
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and all). For example, to save a worksheet, /ZAP the screen, and partially load another worksheet, the command file might look something like:

```
/S filename1 <CR>
OA/ZY/L filename2 <CR>
PA1:B23<CR>
A1<CR>
```

If this file is given the name PLOAD.XQT, we can then command SuperCalc to /X (execute) command file PLOAD, and the above command string would sequence through.

The first line saves the first worksheet (filename1) on disk. The second line instructs SuperCalc to overwrite any file that may have the same name as filename1 (O), save all of the worksheet (A), zap the screen (/ZY), and load the worksheet "filename2". The third line tells SuperCalc that it is a partial load (P) from the range A1:B23. The fourth line tells SuperCalc where to put that range on the new worksheet.

In creating this executable file, care must be taken in making sure that incomplete commands are no longer in the sequence. For example, if the A in the second line is accidentally left out, SuperCalc

will ignore all subsequent entries until either an A (all), P (part), or V (values) is encountered, to finish off the save instruction. Needless to say, this could cause unpredictable, and almost always wrong, results.

### Applying the /X command

Examine the account categorization task discussed earlier. Remember, five account subtotals from a general list of expenditures were needed. Referring to Figure 3, it was suggested that five columns be set up, each devoted to keeping track of one individual account. As noted above, this requires memory, which, depending on what else is on the worksheet, may not be available. If one column could be used five times over, the memory requirements would be much reduced. If a specific cell somewhere on the worksheet kept track of which account was being totalled at any particular time, and acted as a key as to where to place the column total on the worksheet, it would indeed be possible (but tedious) to use just one calculation column to save memory space. To illustrate, consider the worksheet in Figure 4.

	A	B	C	D	E	F	G
1							
2	CALCULATION AREA	CAT	DEBIT	ACCT #	TOTALS		BUDGET
3							
4	IF (C4=5,D4,0)	5	3	500	1	IF (OR (B4=1,B4=0),SUM (A4:A100),F4)	1000
5	IF (C5=5,D5,0)		5	125	2	IF (OR (B4=2,B4=0),SUM (A4:A100),F5)	1500
6	IF (C6=5,D6,0)		4	22.01	3	IF (OR (B4=3,B4=0),SUM (A4:A100),F6)	2000
7	IF (C7=5,D7,0)		4	38.88	4	IF (OR (B4=4,B4=0),SUM (A4:A100),F7)	500
8	IF (C8=5,D8,0)		2	22.17	5	IF (OR (B4=5,B4=0),SUM (A4:A100),F8)	3500
9	IF (C9=5,D9,0)		5	20.00			
10	IF (C10=5,D10,0)		3	104.00			
11	IF (C11=5,D11,0)		1	424.50			
12	IF (C12=5,D12,0)		2	84.47			
13	IF (C13=5,D13,0)		4	96.88			
14	IF (C14=5,D14,0)		5	840.00			
15	IF (C15=5,D15,0)		3	45.50			
16	IF (C16=5,D16,0)		1	356.45			
17	IF (C17=5,D17,0)		2	80			
18	IF (C18=5,D18,0)		2	678			
19	IF (C19=5,D19,0)		5	50.12			

Figure 4



Account #5 is used in Figure 4 only as an example. To finish our task, each of the four other accounts would require their own spreadsheet, which could be quite tedious to create. However if an .XQT program was written to go through the sequence for each account, the work could be reduced to typing /X for execute. Such a program is listed in Figure 5.

```

/GM/GC
/UA4:A100
=B4
0
!
=B4
1
=A4
IF(C4=1,D4,0)
/RA4
A5:A100
=E4
!
=B4
2
=A4
IF(C4=2,D4,0)
/RA4
A5:A100
=E4
!
=B4
3
=A4
IF(C4=3,D4,0)
/RA4
A5:A100
=E4
!
=B4
4
=A4
IF(C4=4,D4,0)
/RA4
A5:A100
=E4
!
=B4
5
=A4
IF(C4=5,D4,0)
/RA4
A5:A100
=E4
!

```

The program executes as follows:

- Manual calculation on.
- Calculate column by column, instead of row by row.
- Unprotect the calculation area.
- Repeat the next sequence six times (for B4 = 0 to 5) or as many times as there are accounts.
  - a) B4 set equal to an account #.
  - b) The formulas for column A establish the cell values equal to those in column D only if the relevant C cell equals the account # in B4. (Whew!)
  - c) A calculation is then forced where the formulas already established on the worksheet in column F assign the sum of the A column to the relevant F cell, which represents the five account totals—the object of our task. If everything checks out, you should end up with these totals:

Acct #	Total
1	780.95
2	864.64
3	649.50
4	157.77
5	1035.12

As you can see, this execute command duplicates the efforts of the spreadsheet shown in Figure 4, but does it for all five accounts.

*Lee Mowatt has spent five years with industrial test computers of all kinds and is now serving as a microcomputer consultant for medical applications.*

Figure 5

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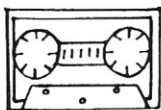
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Barbara Elman

For every Osborne program written, a manual is produced. Many times these instruction books are composed by the same person who wrote the program code, and are as incomprehensible to the end user as the code itself. Non-programming computerists are becoming quite sensitive to the documentation which comes with the software they buy, and frequently pass over good products due to bad manual preparation. While software publishers are paying more attention to packaging and advertising design these days, they often don't seem to realize that the printed pages accompanying the disks are an integral part of the product.

The job of documenting software instructions is not a simple task for even the most technically inclined creative writer. It takes a special blend of organization and imagination to meet the needs of today's Osborne users. After supervising the revision of an especially complex manual for a major software

firm last summer, I found myself dreaming of the ultimate technical writer's tools. Wouldn't it be nice if your computer could outline the manual, rearrange footnotes, create an index and table of contents, and compile the bibliography at the push of a button? Even with the writer-friendly software close at hand, that's a lot to ask of a single program.

Several programs, however, can fulfill most of my dream: Manual Maker (from PromptDoc); Documate/Plus (from Orthocode); Footnote and Bibliography (from Pro/Tem).

The PromptDoc Manual Maker is a marvelous "computer-assisted writing tool" that walks through the process of planning, outlining, and writing a user manual. Designed by Larry Gress and Jim Brummett of PromptDoc (a software marketing/documentation consultancy since 1975), it is the result of their personal experiences producing manuals for major software companies and sellers. Larry Gress also leads



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one-day seminars on designing user manuals that sell software, emphasizing that good documentation is created by writers and technical people who understand the needs of the end user. The seminar is held several times a year in most major cities for \$145, and the seminar manual—different from the software manual—is well worth the course fee. The Manual Maker program, at \$245 (including software manual; manual only \$45) is a bargain, considering the time and effort it can save the writer in a single documentation project.

While the ideal situation is to construct the manual before software design begins by detailing the desired results, the planned audience, and the preferred procedures, most manuals are constructed after the software is complete or during final debugging. Then the rush for hard copy is really on. Manual Maker can help in either case—while the designer and/or tech writer prepares program specs and market analysis, or helping the harried after-design documentarian get the proper words on paper.

The PromptDoc people have found that there are nine standard chapters which should appear in most manuals. The software modules are based on these, but can be customized to include others or delete those not valid for any project. Standard chapter outlines are provided, with sample paragraphs to use, revise or refuse as desired. Page layout can also be customized, but a standard numbering system makes it easier to create a table of contents from chapter and subtopic headings. The table of contents is then compiled into a text file for editing into the preferred format.

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To use Manual Maker, run the program and walk with it through each chapter. An outline is first, with suggestions for section detailing. Sections that don't apply can be deleted, standard paragraphs can be used by filling in the product name where prompted, or skeleton text can be composed, to be fleshed out later. From the revised outline and skeleton, the text is actually composed, filling in the details. Then revision occurs, eliminating prompts and instructions,

until final copy is achieved, table of contents created, and all is printed and reviewed.

This may sound more complex than simply sitting down to a blank screen, but having a pre-set outlining tool can eliminate writers' blocks which often occur before a project gets rolling. It also helps to check progress along the way, providing information about how much more must be created, what is needed to fill in the blanks, and even better, how much has already

been completed.

The second half of the Manual Maker manual includes a Writer's Guide with an 8-point "usability" rating scheme for evaluating final copy. It is especially helpful to new technical writers who need an overview of what makes a good manual. Sample photos of manuals PromptDoc has created for clients demonstrate a variety of possible final products, including graphics, charts and screen illustrations. Since both the page layout and the cover/title page design are crucial to user response, it helps to consider the range of options available from the same outlining tools before you begin.

I attended Larry Gress' seminar last fall and gained valuable insight into the problems facing technical writers, along with solutions and tips. While not every manual or project will fit the "standards," I highly recommend the PromptDoc seminars and software as resources for freelance technical writers as well as corporate departments. It is my hope that software tools like these will allow writers to produce better work with less effort. In the long run, everyone benefits—writers, software firms, and especially end-users. Details on these and planned computer-assisted writing tools are available from PromptDoc, at 833 W. Colorado Ave., Suite 113, Colorado Springs, CO 80905; 303-471-9875.

The other programs mentioned can also benefit documentation projects, academic work, and other technical writing. For example, Footnote numbers and formats notes in WordStar text files. Run independently of WordStar, it numbers the notations consecutively and reformats the file, placing the notes at the bottom of the appropriate page or into a separate footnote file for printing at the document's end. A single symbol is used to denote footnote placement (usually "@"), so if numbers are added or removed in revision, the writer re-runs Footnote and *voila!* the footnotes are consecutively renum-

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bered and the pages reformatted accordingly. Footnote comes as part of the writer's package WORD-PAC for Osborne computers. Pair, a handy program that checks print command pairs to make sure each on-toggle has a corresponding off-toggle is available from computer stores or by mail from Digital Marketing, 2363 Boulevard Circle, Walnut Creek, CA 94595; 415-947-1000.

Bibliography allows the creation of brief literary citations in a text file and their annotation in an appended library document. It then replaces each in-text citation with the properly noted listing, based on a format created in front. This can also work with footnoted citation entries. The final bibliography is then produced, picking up all citation details and constructing an alphabetical listing, including order number if desired. It can be used with files created under most CP/M word processors, and is not limited to WordStar files as is Footnote. (Available also at computer stores or from Digital Marketing.)

Documate/Plus (also in WORD-PAC or individually at computer stores) from OrthoCode takes care of the last two painful steps of manual preparation—indexes and tables of contents. Working with WordStar again, the insertion of dot commands lets Documate/Plus recognize the lines to be referenced. A sidelight is the ability to note "See" or "See Also" references in the index as well as headings and subheadings. The Documate/Plus manual's index and table of contents are quite effective, and were generated with the program itself.

As more computer-assisted writing tools are developed, proper focus can be put on composing and content rather than data organization, page format and indexing details. The work of technical and creative writers alike will improve, resulting in more creative and usable manuals in the years to come.

## SOFTWARE FOR OSBORNE 1

**SBACOUNT:** Accounting for small business. Tracks all income & outgo, prints checks, posts chart of accounts. Prints chart of accounts, trial balance, profit and loss statement, & check ledger. Reconciles and prints reconciliation. Generates an Income & Expense journal for audit purposes. **ONLY \$79.00**

**MBACOUNT:** Accounting for small business. Full general ledger (20 asset, 20 liability, 20 income, 30 expense & 10 capital accounts all user assigned) PLUS all the features of SBACOUNT as above. **ONLY \$89.00**

**PROFBILL:** Automatic bookkeeping & invoicing for Doctors, Lawyers and other professional people who invoice at various hourly rates. Will handle up to nine partners/employees. Prints invoice or saves for future billing. **ONLY \$89.00**

**MAILLIST:** Mailing list, customer handling, filing program, ten data fields per customer. 8 character cust # - user (or dated program) assigned, sorts by most fields. Add, delete or modify any record. Prints all or part on 1, 2 or 3-up labels on 80 column printer. **ONLY \$89.00**

**FINANCE:** Personal financial program. Prints checks, posts amount to selected budget category, posts debits and deposits, prints check ledger, reconciles and prints reconciliation statement. Similar program for charge cards. Extracts and prints list of expenditures in selected budget categories. **ONLY \$79.00**

**TOUCHTYP:** Touch typing course, Beginning, Intermediate & Advanced. Tests and displays typos and displays final score. **ONLY \$79.00**

**STANFORM:** Need to fill out standard or non-standard forms? This program generates programs for printing data in the proper location on invoices, gov't forms, insurance claims, any form that will fit into your printer. **ONLY \$79.00**

**MSBCHART:** Prints MICROSOFT BASIC programs, prints cross reference list of all referenced lines, prints list of variables cross referenced to each line where used. A godsend if you modify or debug Mbasic programs. **ONLY \$79.00**

Price includes disc, manual, and shipment next working day by first class mail. Mail in your order today or request detailed program listing. Better yet, if using accepted credit card, phone your order or data request to our 7 day, 24 hour phone service. Californians must add 6% to all prices.

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# New Products

## The OCC Software Library is growing

### Keep up

This news is for those users who never mailed in their warranty cards, thus never receiving end user bulletins: **software upgrades** for the O-1 are now available from Osborne dealers. WordStar 3.3 from Micropro is available, as well as CBASIC 2.38 from Compiler Systems Inc., SuperCalc 2 from Sorcim and the P-System.

Check with an Osborne dealer for current prices. The P-System

is free for all registered double-density users.

The following new additions to the OCC approved software list can be ordered or purchased directly from your local authorized Osborne dealer.

### High-level compiling

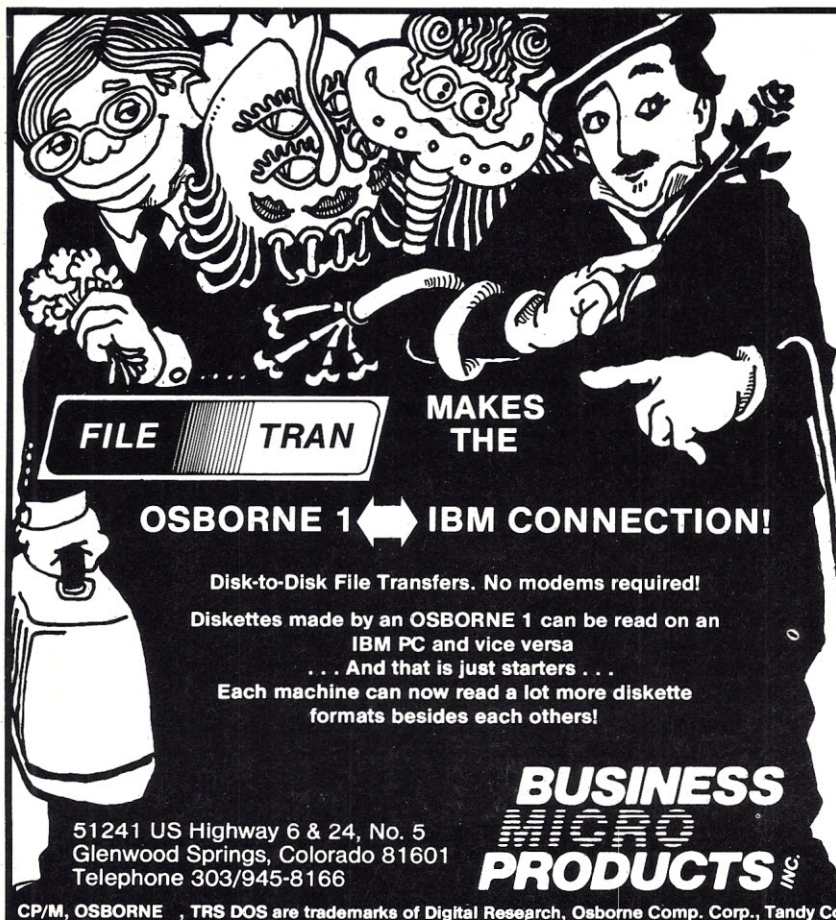
**COBOL-80** is OCC's latest addition to its family of Microsoft high-level

compilers, offering more features than any other COBOL compiler for microcomputers. These include advanced screen editing, relocatable object code and GSA validation for lower intermediate level 1974 ANSI Standard COBOL. COBOL is the most widely used programming language for business and commercial applications, making the Osborne an even more powerful tool for business productivity.

Check with an Osborne dealer for price.

### Index fingering

**Portable Cardbox** by Caxton may put the kibosh to you ever again having to shuffle through an index card file. A versatile information handling system, it is the efficient way to store and reference data. Using computer memory and speed, data can be recorded in Cardbox files by subject, title, name or any other way desired. The information can then be updated, sorted, or searched by



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Disk-to-Disk File Transfers. No modems required!

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... And that is just starters ...

Each machine can now read a lot more diskette formats besides each others!

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Glenwood Springs, Colorado 81601  
Telephone 303/945-8166

CP/M, OSBORNE, TRS DOS are trademarks of Digital Research, Osborne Comp. Corp., Tandy Corp. respectively.

### DISKETTE FORMAT COMPATABILITY

**Ver. 2.16 - runs on Osborne 1. Transfers all the following formats to the Osborne 1.**

- IBM PC DOS DD
- WANG PC DOS DD
- CREMEMCO CDOS SD
- OSBORNE SD
- XEROX SD
- ACCESS DD
- HP 125 DD
- KAYPRO II DD
- NEC PC 8000 DD
- OSBORNE DD
- TRS MOD I CP/M SD
- LIFEBOAT
- OMIKRON
- MARTIN DATA
- OTRONA ATTACHE DD
- MEMORY MERCHANT DD
- TRS MOD III CP/M
- MORROW MICRO DD
- SUPER BRAIN DD
- ZENITH DD

**(Ver. 2.15 transfers TRS DOS MOD I & III plus a variety of CP/MS to OSBORNE. Available separately.)**

**Ver. 2.18 - runs on IBM PC. Transfers all the following formats to IBM PC DOS. Call for availability on IBM compatibles. Sorry, no single density on IBM PC.**

- OSBORNE 1 DD
- IBM CP/M 86 DD
- WANG PC DOS DD
- ACCESS DD
- DEC VT 180 DD
- EPSON VALDOCS DD
- EPSON CP/M DD
- HP 125 DD
- KAYPRO II DD
- MEMORY MERCHANT DD
- TRS III CP/M
- MORROW MICRO DD
- NEC PC 8000
- OTRONA ATTACHE DD
- SUPERBRAIN DD
- TELEVIDEO DD
- ZENITH DD

**We will be adding new formats. If there is a CP/M soft sector format you need but not listed call us! Sorry no APPLE.**

**Individually only \$99.  
Additional Versions \$50.  
when ordered together.**

Add \$3. shipping, C.O.D. \$1.65, Foreign \$10., Colorado residents add 3% tax.





topic, keyword, date or other criteria. It can be used with WordStar and in MBASIC programs. Portable Cardbox features include on-screen index "cards," flexible formats, cross-referencing and rapid file searching. Check with an Osborne dealer for price.

---

## Money, money, money, money

Beginning with signature-ready fee agreements and on with time and expense entries, pre-billing reports, application retainer fees and more, **The Attorney's Money-\$-Machine** wraps up the case for financial management, law-style.

Documents can be prepared during initial client interviews, expense entries input as they occur, reviews of earnings, outlays and receipts are easily accessible and cash flow can be pinpointed at the stroke of a key or two via this software marketed by Legal Management Services, Inc.

All Money-\$-Machine Software is contractually supported and guaranteed to meet predetermined performance benchmarks, according to representatives. The program comes as a package with computer, letter-quality printer and word processor or as stand-alone software for the O-1.

Legal Management Services,  
Inc.  
P. O. Box 331168  
Coconut Grove, FL 33233-1168

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## Stop the pirates

Software protection schemes haven't worked and Richard Rantilla of the newly-formed **Programmer's Guild** is trying a new tactic short of making the pirates walk the plank.

The Programmer's Guild provides programmers a way to register and distribute their programs without the "bother" of copy protection. Registered programs include copy instructions and a

statement about the programmer's conditions under which authorized copies may be made. These conditions include the copier sending a nominal fee and the copier's name and address to the Guild.

Guild representatives claim that since most enthusiasts learn about good programs through friends or acquaintances, they may now copy registered programs on the spot, providing a reliable (in terms of knowing what they're getting), inexpensive and convenient means of obtaining software.

Businesses and corporations as well can control internal copying of registered programs for all their departments and without concern about copyright lawsuits.

Protection against rip-offs and vandalized copies is built into the service. Royalties on the local copying market and lower program "launching" costs are benefits available to programmers who use the service.

Richard Rantilla  
The Programmer's Guild  
P.O. Box 824  
East Lansing, MI 48823



---

## Arrows diversified

Who needs to be limited by a little thing like a SETUP program? No one, anymore, it appears—thanks to a set of programs by Compu-Magic called **Manykey**. Designed for the O-1, Manykey allows every .COM program to define its own control number and arrow keys, independent of the keys defined by SETUP.

The program customizes each program's working environment without the need to re-boot the system or run SETUP. The use can automatically have exact key-definitions for programs ranging from MBASIC to WordStar to SuperCalc, to PIP and DDT. The definitions are easily changed and Manykey can print program names and key definitions to fit on a standard index card.

Promoters say Manykey is easy to use and "almost impossible to misuse." Each program is small and compact, allowing those regularly used to be kept on each disk



while preserving disk space.

Cost is \$20. (Maryland residents add \$1 tax.) Program disk is warranted for five years. Documentation includes program descriptions, instructions, and examples of useful key-definition sets. It works with any standard O-1, rev. 1.3 to 1.44, single or double density.

CompuMagic  
P.O. Box 780  
Severn, MD 21144

---

## Open wide

**Dental Practice Management**, a billing system designed to make dentists the envy of their peers, is now being offered by Digital Marketing. The accounts receivable system for one to nine dentists or hygienists in a practice has an elaborate error trapping system to minimize operator keyboard errors and detect common accounting errors.

Billing can print either on "speed mailer" or custom forms; insurance billing is printed on ADA approved forms and a form creation option is included.

Cost is \$995 for the CP/M-based system.

Digital Marketing  
2363 Boulevard Circle, Suite 8  
Walnut Creek, CA 94595

---

## Arcturus trilogy

Three new arcade-style video games for the Osborne 1 are now available from the Software Toolworks. **The Arcturus Trilogy** is set against the background of the invasion of the peaceful Arcturus system by the fleet of Ludwig the Loathsome.

The games are Arcturus Ranger, Arcturus Control and Arcturus Terminator. Each comes with a 12-page instruction booklet, including an illustrated episode of the Arcturus Trilogy story. Ranger and Terminator sell for \$24.95 each. Control is \$19.95.

Software Toolworks  
15233 Ventura Boulevard,  
Sherman Oaks, CA 91403

---

## The CP/M Wiggle

A new word game for CP/M computers including the Osborne 1 has been released by Software Toolworks. Called **Word Wiggle**, the game is a challenge: to find as many words as possible in a four-by-four square of letters, with longer words scoring more points. Competition is against both the clock and the computer itself with its 30,000 word dictionary.

Eleven computer skill levels allow for tougher competition as skill

develops, as well as square repetition for two or more players. Word Wiggle sells for \$29.95 at many computer dealers, or direct from the company.

Software Toolworks  
15233 Ventura Boulevard,  
Suite 1118  
Sherman Oaks, CA 91403

---

## Market Maestro

A technical analysis system for stock selection and timing called **Market Maestro** has been introduced by AJH Systems. Market Maestro generates buy and sell signals on any stock or commodity the user wishes to track. The program is based on an exponentially weighted moving averages cross over algorithm.

Price data may be entered manually or downloaded from CompuServe or Dow Jones News Retrieval Service using a modem. Market Maestro comes with a 60-page user's manual. Price is \$125.

AJH Systems  
3032 S. Saulsbury St.  
Denver, CO 80227

---

## Power master

The **Power Director**, a new desktop power management and transient protection system has been

---

## DISCOUNT PRICES FROM THE OSBORNE® SPECIALISTS

### COMMUNICATIONS

• **Modem for Osborne 1**, Light compact Signalman Mark V complete with cables and modem port connector. Includes FREE subscription to THE SOURCE information utility (while supplies last). Only \$104.95.

### SUPPLIES

• **Elephant Memory Systems Diskettes** with lifetime guarantee, in boxes of ten: Single density, \$26. Five or more boxes: \$22 each Double density, \$29. Five or more boxes: \$25 each

• **Protect your Osborne** with a cloth-backed vinyl dust cover, only \$18.95. Also available for printers, monitors, other computers.

• **Custom Cables** are available to connect your Osborne with virtually all peripherals. Call or write for other prices. Osborne to Epson/Centronics-type Parallel: 3 ft., \$39; 6 ft., \$43  
Osborne to Smartmodem: 3 ft., \$27; 6 ft., \$29

Osborne Keyboard Extensions: 3 ft., \$23; 6 ft., \$25  
**SOFTWARE**

• **The Word Plus**, a writer's best friend. Checks spelling, counts words and even inserts corrections into your text for you. Only \$122.50.

• **Kamakaze Ozzy**, is a arcade-style game with great moving graphics. Can be played on the Osborne with an Atari or Wico joystick. Only \$42.45, includes IEEE/joystick adapter. (Wico Famous Redball Joystick, just \$38.50.)

All prices include domestic shipping and handling. Outside continental U.S., please add 10% to total order. Maryland residents add 5% tax. All orders must be pre-paid by check or money order. Allow 10 days for disc deliveries and 3 to 4 weeks for other items. Call or write for our complete catalog of discount supplies and peripherals, including monitors and printers.

## MPE Consultants

P.O. BOX 2485 COLUMBIA, MD 21045 (301) 997-0280

COMPUSERVE: 71445,742

SOURCE: STE914





released by Computer Accessories of San Diego.

Its four stage automatic circuitry protects against line transients up to 10,000 watts, over current conditions up to 4,500 amps, and EMI/RFI noise. The unit also effectively prevents signals "riding" the power line to the computer and other peripherals. It responds within one nanosecond, reduces the opportunity for line noise to enter and affect data integrity. It also clips spike voltages that might otherwise damage delicate solid state circuits.

Lighted rocker switches and a master control switch allows the

user fingertip control and monitoring of each component in the system. Power Director also solves power cord clutter and can act as a monitor stand. It stands two inches high, and is available for immediate delivery in Osborne gray with five 120 VAC channels. Suggested retail price is \$119.

Computer Accessories  
7696 Formula Place  
San Diego, CA 92126

### Easy, easy, easy

Touted as the "only accounting system that fits on one disk," **The Champion** is a new software package from Data Base Re-

search Corporation. It includes general ledger and financial statements, accounts payable (with purchase orders), accounts receivable (with order entry and point of sale), inventory and payroll—on one floppy disk in 270K. It retails for \$495 per module, with a total of five accounting modules.

The "?" key answers questions on screen and includes the page number in the manual that can be referenced for more information. If the computer crashes, the return key starts the "recover" program and puts books back in balance. Creators of The Champion say it was designed by assuming that "the average user knew nothing about computers or accounting, and wasn't going to read the manual. We spent two years programming into The Champion what the user doesn't know, but should."

Data Base Research  
Corporation  
12687 West Cedar Drive,  
Suite 310  
Lakewood, CO 80228

## TRA VIDEO SYSTEM CAN ADD CHARACTER TO YOUR OSBORNE 1

(Without your Osborne 1 ever leaving your desk.)



Monitor not included with TRA system.

**SPECIAL PRICE OF \$330.**

(plus \$6.00 shipping and handling)  
30-Day Money-Back Guarantee

### 80 and 100 COLUMN VIDEO

The Research Associates introduces a video system as an add-on to the Osborne 1. The system provides the versatility of an 80 or 100 column video screen format on an external monitor without loss of Osborne 1's video capabilities or speed.

TRA video system enhances your Osborne 1's video capabilities by providing:

- 80 or 100 character by 24 line window into a 128 character by 32 line video format
- Reverse video and blinking of the display
- Easy connection to your external monitor by any Osborne user
- Composite and TTL video monitor outputs
- Soft scrolling
- Normal printer operation
- Driver software supplied by TRA for easy set up.

Information and Specifications available from:

**THE RESEARCH ASSOCIATES • FOREST HILL • DUNSTABLE, MASSACHUSETTS • 01827**



## New Facit

Facit, Inc., introduced at NCC its multi-purpose intelligent **4570 printer** which includes a range of features, capabilities and controls that promoters say are not available ordinarily in a single printer.

It prints near-letter quality high resolution characters and graphics at high speed. It can store a vari-



ety of character sets and formats and handle nearly all types of paper, so that it can be matched exactly to task requirements. Fanfold paper and cut sheets of various sizes can be used with multiple selections of paper input and output. For extensive use of cut sheets, an optional feeder/stacker automatically feeds paper from one of two magazines, then stacks it if desired.

Text can be positioned using either tabulation of X, Y coordinates. The 4570 incorporates a sophisticated software VFU. Up to seven formats can be pre-defined and called up locally or remotely as required, so that tasks can be mixed and formats matched to the selected paper.

Character fonts are available for the United States and 12 other countries. With its Facit Flexhammer printhead, the 4570 can switch instantly from dot matrix characters to high-quality printing for word processing. Price is \$3,295.

Facit, Inc.  
235 Main Dunstable Road  
Nashua, NH 03061

## THE ORGANIZERS by APTEK®



Already in great demand, the Organizers are made of a special, textured high-impact plastic and offer you an exceptional combination of innovative design, dust-free maintenance, and contemporary styling—at a remarkably affordable price!

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Designed for the Osborne® micro-computer with a built-in shelf for your system's disks and manuals providing additional storage room for computer-related supplies. Elevates your screen for reduced glare and eye strain. (Can also double as MX-100 type printer stand.)

APTEK 221 only **\$29.50**

### PRINTER STAND

(not shown)

A hard-working accessory for all MX-80 type printers. Includes a built-in shelf and enough storage room under the printer to store a full 4" of paper. The finest printer stand on the market today!

APTEK 216 only **\$27.50**

### FLOPPY DISK RACK

An invaluable addition to any micro-computer system. Attractive and durable with a hinged acrylic cover for maximum disk protection. Reduces dust-related disk errors! Designed for 5" disks.

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APTEK 320 (fits MX-80) only **\$97.00**

APTEK 325 (fits MX-100) only **\$113.00**

### MONITOR STAND

This stylish and extremely well crafted Organizer is just what your system needs. Holds monitor securely at eye level for easier reading and reduced glare. Saves valuable desk space.

APTEK 410 only **\$17.50**

Send check or money order to Apogee Designs Ltd., 3100 Fallscliff Rd., Baltimore, MD. 21211. Phone (301) 235-7523. Master Card and Visa accepted. Add \$2.50 for freight per unit to anywhere in the Continental U.S. 5% sales tax for MD. residents. Organizers available in computer off-white. Distributor inquiries welcome.

**APOGEE  
DESIGNS  
LTD.**

*New Product information is derived from press releases sent to The Portable Companion by the producing companies. Statements of fact or opinion expressed in the New Product announcements that appear in this magazine are those of the producing company and have not been checked for accuracy by Osborne Computer Corporation. Before purchasing any of the products listed in this section, you are advised to check the validity of all claims made for the product.*



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If you encounter problems with a product, first attempt to resolve the dispute with the supplier or manufacturer. If you continue to have problems, please WRITE to us, describing in full what has happened and what attempts you've made to resolve the problem. Please include a phone number where you can be reached during business hours. While we can't promise that we'll settle the matter for you, we do regard the advertising in this publication as a service to our readers, and therefore, closely monitor complaints and criticisms concerning our advertisers.

## Next Time

November will be a month of information as well as thanksgiving, as evidenced by what's coming up in the next issue of the Portable Companion:

- an Emergency Medical Technician creates a program that instantly computes the possible deadlines of gases released in highway or train accidents.
- the Osborne becomes a movie screen of sorts with a program for animated graphics.
- if video games rank somewhat low on the educational value sought for pint-sized computer users, a detailed article on educational software should help in expanding a child's computer literacy.
- and, of course, columns and more...

## Keep in Touch with your Companion

Let your *Companion* keep giving good advice on how to get the maximum from your Osborne. There are developments happening every day:

- new software
- new accessories
- new ways to use your computer

The *Portable Companion* keeps you in touch with the very latest hardware and software while keeping you connected to an international network of sophisticated users throughout North America and the world.

Save time now by completing the convenient subscription card. **Don't miss an issue!** Be in touch by staying in touch.

The *Portable Companion*  
26538 Danti Court, Box 18, Hayward CA 94545

## Now That's Companionship!



# Wrap-Up

## The computer evolution

A benevolent kind of lunacy prevails with people who go so far as to actually buy items like personal—let alone portable—computers. We ask you to consider the possibility of genetic mutation—evolution, as opposed to revolution—as an explanation for the following aberrations.

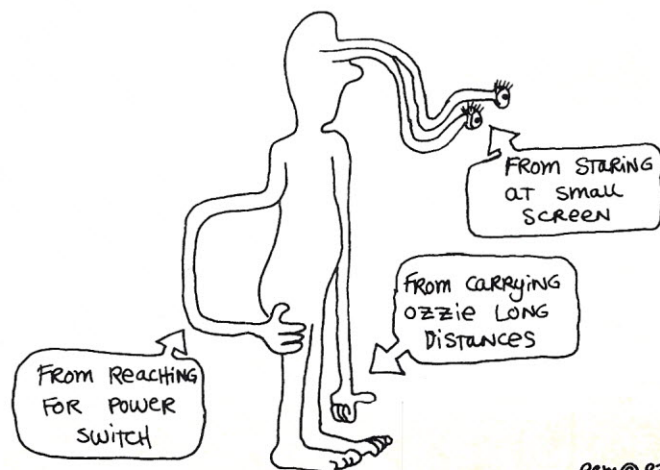
**Muttering.** Often the first sign that a tiny green screen glows frequently into the late, late night. In the midst of normal conversation, a suspected Osborne user may acquire an unnatural gleam in the eye accompanied by such low-decibel phraseology as, "I bet I can do that ... umm hmmm ... just slip in another quote mark at that address in BASIC ..."

**Aversion to social situations.** Users with this quirk are detected by pallid complexions and rapid, mole-like blinking. A documented case study of one Osborne family noted their last foray into fresh air consisted of standing in line to see War Games. They did not want to stop for pizza.

**Marked attitudinal differences.** As in, "If it works, fix it anyhow." This single-minded determination often results in a 500-line program that saves two keystrokes.

**Energy-consciousness.** Osborne users are a sportive lot, but are often scornful of the mundanities of life. The other day our technical editor was asked, "If you could write a program to walk down the street for you and pick up a half-gallon of milk, would you do it?" He chuckled, blushed—and started muttering.

### THE HIGHLY EVOLVED OSBORNE USER



PAM © 83



# Introducing the Most Powerful Business Software Ever!

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### VERSARECEIVABLES™ \$99.95

VERSARECEIVABLES™ is a complete menu-driven accounts receivable, invoicing, and monthly statement-generating system. It keeps track of all information related to who owes you or your company money, and can provide automatic billing for past due accounts. VERSARECEIVABLES™ prints all necessary statements, invoices, and summary reports and can be linked with VERSALEDGER II™ and VERSAINVENTORY™.

### VERSAPAYABLES™ \$99.95

VERSAPAYABLES™ is designed to keep track of current and aged payables, keeping you in touch with all information regarding how much money your company owes, and to whom. VERSAPAYABLES™ maintains a complete record on each vendor, prints checks, check registers, vouchers, transaction reports, aged payables reports, vendor reports, and more. With VERSAPAYABLES™, you can even let your computer automatically select which vouchers are to be paid.

### VERSAPAYROLL™ \$99.95

VERSAPAYROLL™ is a powerful and sophisticated, but easy to use payroll system that keeps track of all government-required payroll information. Complete employee records are maintained, and all necessary payroll calculations are performed automatically, with totals displayed on screen for operator approval. A payroll can be run totally, automatically, or the operator can intervene to prevent a check from being printed, or to alter information on it. If desired, totals may be posted to the VERSALEDGER II™ system.

### VERSAINVENTORY™ \$99.95

VERSAINVENTORY™ is a complete inventory control system that gives you instant access to data on any item. VERSAINVENTORY™ keeps track of all information related to what items are in stock, out of stock, on backorder, etc., stores sales and pricing data, alerts you when an item falls below a preset reorder point, and allows you to enter and print invoices directly or to link with the VERSARECEIVABLES™ system. VERSAINVENTORY™ prints all needed inventory listings, reports of items below reorder point, inventory value reports, period and year-to-date sales reports, price lists, inventory checklists, etc.

### VERSALEDGER II™ \$149.95

VERSALEDGER II™ is a complete accounting system that grows as your business grows. VERSALEDGER II™ can be used as a simple personal checkbook register, expanded to a small business bookkeeping system or developed into a large corporate general ledger system **without any additional software.**

- VERSALEDGER II™ gives you almost unlimited storage capacity (300 to 10,000 entries per month, depending on the system),
- stores all check and general ledger information forever,
- prints tractor-feed checks,
- handles multiple checkbooks and general ledgers,
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